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cttgcgtcca tggacactgt gccctgagct gcccctacc ccacccacc taaagtacct     1500

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tggcgaggcc tctctcagga gcaggggcat tgctgatttt gtctgcccaa tccatcctgc    1800

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cggggaggtc acgatggcgc gacgtctgca gaaatttcat gaggaggtat cagtctagag      480

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aataaagtgt caagcaag                                                    738


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aaattattgg aggaaatgaa gtaactctc attcaagacc ctacatggtc ctacttagtc      180

ttgacagaaa aaccatctgt gctggggctt tgattgcaaa agactgggtg ttgactgcag      240

ctcactgtaa cttgaacaaa aggtcccagg tcattcttgg ggctcactca ataaccaggg      300

aagagccaac aaaacagata atgcttgtta agaaagagtt tccctatcca tgctatgacc      360

cagccacacg cgaaggtgac cttaaacttt tacagctgac ggaaaaagca aaaattaaca      420

aatatgtgac tatccttcat ctacctaaaa aggggatga tgtgaaacca ggaaccatgt      480
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gccaagttgc agggtggggg aggactcaca atagtgcatc ttggtccgat actctgagag      540

aagtcaatat caccatcata gacagaaaag tctgcaatga tcgaaatcac tataattta       600

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agaaacacct caactggata attatgacta tcaagggagc agtttaaaata accgtttcct     840

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<212>  DNA
<213>  Homo sapiens
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ggccctggag aggatgttcc tgtccttccc caccaccaag acctacttcc cgcacttcga      180

cctgagccac ggctctgccc aggttaaggg ccacggcaag aaggtggccg acgcgctgac      240

caacgccgtg gcgcacgtgg acgacatgcc caacgcgctg tccgccctga gcgacctgca      300

cgcgcacaag cttcgggtgg acccggtcaa cttcaagctc ctaagccact gcctgctggt      360

gaccctggcc gcccacctcc ccgccgagtt cacccctgcg gtgcacgcct ccctggacaa      420

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<212>  DNA
<213>  Homo sapiens
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caagctgagc gagctgcacg cctacatcct gcgcgtggac ccggtcaact tcaagctcct      360
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gtcccactgc ctgctggtca ccctggccgc gcgcttcccc gccgacttca cggccggaggc      420

ccacgccgcc tgggacaagt tcctatcggt cgtatcctct gtcctgaccg agaagtaccg      480

ctgagcgccg cctccgggac ccccaggaca ggctgcggcc cctcccccgt cctggaggtt      540

ccccagcccc acttaccgcg taatgcgcca ataaaccaat gaacgaagc                  589
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<211>   626
<212>   DNA
<213>   Homo sapiens

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ttggtggtga ggccctgggc aggctgctgg tggtctaccc ttggacccag aggttctttg      180

agtcctttgg ggatctgtcc actcctgatg ctgttatggg caaccctaag gtgaaggctc      240

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gcacctttgc cacactgagt gagctgcact gtgacaagct gcacgtggat cctgagaact      360

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<212>   DNA
<213>   Homo sapiens

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ttggtggtga ggccctgggc agattactgg tggtctaccc ttggacccag aggttctttg      180

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gcactttttc tcagctgagt gagctgcact gtgacaagct gcacgtggat cctgagaact      360

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ccccacaaat gcaggctgcc tatcagaagg tggtggctgg tgtggctaat gccctggctc      480

acaagtacca ttgagatcct ggactgtttc ctgataacca taagaagacc ctatttccct      540
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gacttttaag taccatggag aacagggggc cagaacttcg gcagtaaaga ataaaaggcc      180

agacagagag gcagcagcac atatctgctt ccgacacagc tgcaatcact agcaagctct      240

caggcctggc atcatggtgc attttactgc tgaggagaag gctgccgtca ctagcctgtg      300

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cccctggacc cagagatttt ttgacagctt tggaaacctg tcgtctccct ctgccatcct      420

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taaaaacatg gacaacctca agcccgcctt tgctcaagctg agtgagctgc actgtgacaa      540

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tcctgtgacc ctgacacct ccttctgcac atggggactg ggcttggcct tgagagaaag      780

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atgctggagg agaaaccctg ggaaggctcc tggttgtcta cccatggacc cagaggttct      180

ttgacagctt tggcaacctg tcctctgcct ctgccatcat gggcaacccc aaagtcaagg      240

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acttcaagct cctgggaaat gtgctggtga ccgtttggc aatccatttc ggcaaagaat      420
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tcacccctga ggtgcaggct tcctggcaga agatggtgac tgcagtggcc agtgccctgt      480

cctccagata ccactgagct cactgcccat gattcagagc tttcaaggat aggctttatt      540

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<212>   DNA
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tcagaattca ctaaaaaaaa aaaaaaaaaa                                      3510
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<212>   DNA
<213>   Homo sapiens

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gccagaggga ctcctgcaag ggcgactctg gagggcccct ggtgtgcaag gtgaatggca     720

cctggctaca ggcgggcgtg gtcagctggg acgagggctg tgcccagccc aaccggcctg     780

gcatctacac ccgtgtcacc tactacttgg actggatcca ccactatgtc cccaaaaagc     840

cgtgagtcag gctgggtgt gccacctggg tcactggagg accaacccct gctgtccaaa     900

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<212>   DNA
<213>   Homo sapiens

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gtaagaacta ccagcagcag accgtggtag ccattgacct ggctggagat gagaccatcc    660

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actactcgct caacacagat gacccgctca tcttcaagtc caccctggac actgattacc    1020

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cggccaaatc tagtttcctc ccagaagatg aaaagaggga gcttctcgac ctgctctata    1140

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cctggcaggg accagcgccc ttgcacatgg gcatggttga atctgaaacc ctccttctgt    1440

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<213>   Homo sapiens

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gctgcgctgg atttcaacta ccaccgccag gaaggggatgg aagcgttttt gaagactgtt    180
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agtacccgga tacacatcat gccttccatg aacccagatg gatttgaagc cgtcaaaaag    480

cctgactgtt actacagcat cggaagggaa aattataacc agtatgactt gaatcgaaat    540

ttccccgatg cttttgaata taataatgtc tcaaggcagc ctgaaactgt ggcagtcatg    600

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aagggtcaag tttttgatca gaatggaaat ccattaccca atgtaattgt ggaagtccaa   1080

gacagaaaac atatctgccc ctatagaacc aacaaatatg gagagtatta tctccttctc   1140

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ctgtctctac taaatattag cggggtgtgg tggcgggcac ctgtagtcgc agcctttcgg   1980

gaggctgaga caggagaatc gcttgaaccc tagaggcgga gtttgcagtg agccgagata   2040
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<213>  Homo sapiens

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gggccacact gaccctgata caggcatggc agaagaatgg gaatatttta tactgacaga    660

aatcagtaat atttatatat ttatatttttt aaaatatttta tttatttatt tatttaagtt    720

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gcaggaagcc acccccctgg gccctgccag ctccctgccc cagagcttcc tgctcaagtg    180

cttagagcaa gtgaggaaga tccagggcga tggcgcagcg ctccaggaga agctgtgtgc    240

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cgagttgggt cccacttggg acacactgca gctggacgtc gccgactttg ccaccaccat    480
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gccctcccca tcccatgtat ttatctctat ttaatattta tgtctattta agcctcatat    720

ttaaagacag ggaagagcag aacggagccc caggcctctg tgtccttccc tgcatttctg    780

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aatcatgtca ggcctgtgtg tgaaaggaag ctccactgtc acctccacc tcttcacccc   1440

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ccagcctctc tcatgctttt ggccagacag acatgtgcag gaaggctttt gtgtttccca    180

aagagtcgga tacttcctat gtatccctca aagcaccgtt aacgaagcct ctcaaagcct    240

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taatttatg gctcttctgg gaaactcctc ccctttccca cacgaacctt gtggggctgt     1560

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<213>  Homo sapiens

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ctcaagatga tgacccagct gggaagccac gagaatattg tgaacctgct gggggcgtgc   2100

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166

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cttcatcttt gccaacgtca gtgaggcaga tgacagatat atctgtgacc gcttctaccc    660

caatgacttg tgggtggttg tgttccagtt tcagcacatc atggttggcc ttatcctgcc    720

tggtattgtc atcctgtcct gctattgcat tatcatctcc aagctgtcac actccaaggg    780

ccaccagaag cgcaaggccc tcaagaccac agtcatcctc atcctggctt tcttcgcctg    840

ttggctgcct tactacattg ggatcagcat cgactccttc atcctcctgg aaatcatcaa    900

gcaagggtgt gagtttgaga acactgtgca caagtggatt tccatcaccg aggccctagc    960

tttcttccac tgttgtctga accccatcct ctatgctttc cttggagcca aatttaaaac   1020

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acatttttca gatataaaag actgaccaat attgtacagt ttttattgct tgttggattt   1260

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tgtttcatat tgatgtgtgt ctaggcagga cctgtggcca agttcttagt tgctgtatgt   1380

ctcgtggtag gactgtagaa aagggaactg aacattccag agcgtgtagt gaatcacgta   1440

aagctagaaa tgatccccag ctgtttatgc atagataatc tctccattcc cgtggaacgt   1500

ttttcctgtt cttaagacgt gattttgctg tagaagatgg cacttataac caaagcccaa   1560

agtggtatag aaatgctggt ttttcagttt tcaggagtgg gttgatttca gcacctacag   1620

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<212>    DNA
<213>    Homo sapiens

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ttgcatccgg agagtggaca agaaaatgat gccaccagtc cccatttctc aacacgtcat    180

gaagggtcct tccaagttcc tgtcctgtgt gctgtaatga atgtggtctt catcaccatt    240

ttaatcatag ctctcattgc cttatcagtg ggccaataca attgtccagg ccaatacaca    300

ttctcaatgc catcagacag ccatgtttct tcatgctctg aggactgggt tggctaccag    360

aggaaatgct actttatttc tactgtgaag aggagctgga cttcagccca aaatgcttgt    420
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tctgaacatg gtgctactct tgctgtcatt gattctgaaa aggacatgaa ctttctaaaa      480

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aagtggtcaa atggcaaaga atttaacaac tggttcaacg ttacagggtc tgacaagtgt      600

gttttttctga aaacacaga ggtcagcagc atggaatgtg agaagaattt atactggata      660

tgtaacaaac cttacaaata ataaggaaac atgttcactt attgactatt atagaatgga      720

actcaaggaa atctgtgtca gtggatgctg ctctgtggtc cgaagtcttc catagagact      780

ttgtgaaaaa aaattttata gtgtcttggg aattttcttc caaacgaac tatggaaaaa      840

aaggaagaaa ttccaggaaa atctcgcactg tgggcttttta ttgccatgag ctagaagcat      900

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ttgctgaatg actaccaaca gtgagagccc ttcatgcatt tgcactactg gaaggagtta     1080

gatgttggta ctagatactg aatgtaaaca aaggaattat ggctggtaac ataggttttt     1140

agtctaattg aatcccttaa actcagggag catttataaa tggacaaatg cttatgaaac     1200

taagatttgt aatatttctc tcttttttaga gaaatttgcc aatttacttt gttatttttc     1260

cccaaaaaga atgggatgat cgtgtatttta ttttttttact tcctcagctg tagacaggtc     1320

cttttcgatg gtacatattt ctttgccttt ataatctttt atacagtgtc ttacagaaa     1380

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gcaatatgtg atgtggcaaa tctctattag gaaatattct gtaatcttca gacctagaat     1500

aatactagtc ttataatagg tttgtgactt tcctaaatca attctattac gtgcaatact     1560

tcaatacttc atttaaaata tttttatgtg caataaaatg tatttgtttg tattttgtgt     1620

tcagtacaat tataagctgt ttttatatat gtgaaataaa agtagaataa acacaaaaaa     1680

aaaaaaaaaa aaaaaaaaaa aa                                             1702
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<211>  1237
<212>  DNA
<213>  Homo sapiens

<400>  430
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gcgctcctgc atctgcctcc ccatattcct cggacaccac accctgctgc tttgcctaca      180

ttgcccgccc actgccccgt gcccacatca aggagtattt ctacaccagt ggcaagtgct      240

ccaacccagc agtcgtcttt gtcacccgaa agaaccgcca agtgtgtgcc aacccagaga      300
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agaaatgggt tcgggagtac atcaactctt tggagatgga ctaggatgga gagtccttga      360

acctgaactt acacaaattt gcctgtttct gcttgctctt gtcctagctt gggaggcttc      420

ccctcactat cctaccccac ccgctccttg aagggcccag attctaccac acagcagcag      480

ttacaaaaac cttccccagg ctggacgtgg tggctcacgc ctgtaatccc agcactttgg      540

gaggccaagg tgggtggatc acttgaggtc aggagttcga gaccagcctg gccaacatga      600

tgaaacccca tctctactaa aaatacaaaa aattagccgg gcgtggtagc gggcgcctgt      660

agtcccagct actcgggagg ctgaggcagg agaatggcgt gaacccggga ggcggagctt      720

gcagtgagcc gagatcgcgc cactgcactc cagcctgggc gacagagcga gactccgtct      780

caaaaaaaaa aaaaaaaaaa aaaatacaaa aattagccgg gcgtggtggc cacgcctgt      840

aatcccagct actcgggagg ctaaggcagg aaaattgttt gaacccagga ggtggaggct      900

gcagtgagct gagattgtgc cacttcactc cagcctgggt gacaaagtga gactccgtca      960

caacaacaac aacaaaaagc ttccccaact aaagcctaga agagcttctg aggcgctgct     1020

ttgtcaaaag gaagtctcta ggttctgagc tctggctttg ccttggcttt gccagggctc     1080

tgtgaccagg aaggaagtca gcatgcctct agaggcaagg aggggaggaa cactgcactc     1140

ttaagcttcc gccgtctcaa cccctcacag gagcttactg gcaaacatga aaaatcggct     1200

taccattaaa gttctcaatg caaccataaa aaaaaaa                               1237
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<211>    1125
<212>    DNA
<213>    Homo sapiens

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ctatgaactc cttctccaca agcgccttcg gtccagttgc cttctccctg gggctgctct      120

tggtgttgcc tgctgccttc cctgccccag tacccccagg agaagattcc aaagatgtag      180

ccgccccaca cagacagcca ctcacctctt cagaacgaat tgacaaacaa attcggtaca      240

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gcagcaaaga ggcactggca gaaaacaacc tgaaccttcc aaagatggct gaaaaagatg      360

gatgcttcca atctggattc aatgaggaga cttgcctggt gaaaatcatc actggtcttt      420

tggagtttga ggtatacctt gagtacctcc agaacagatt tgagagtagt gaggaacaag      480

ccagagctgt gcagatgagt acaaaagtcc tgatccagtt cctgcagaaa aaggcaaaga      540

atctagatgc aataaccacc cctgacccaa ccacaaatgc cagcctgctg acgaagctgc      600

aggcacagaa ccagtggctg caggacatga caactcatct cattctgcgc agctttaagg      660
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agttcctgca gtccagcctg agggctcttc ggcaaatgta gcatgggcac ctcagattgt    720

tgttgttaat gggcattcct tcttctggtc agaaacctgt ccactgggca cagaacttat    780

gttgttctct atggagaact aaaagtatga gcgttaggac actattttaa ttatttttaa    840

tttattaata tttaaatatg tgaagctgag ttaatttatg taagtcatat ttatatttt     900

aagaagtacc acttgaaaca ttttatgtat tagtttgaa ataataatgg aaagtggcta    960

tgcagtttga atatcctttg tttcagagcc agatcatttc ttggaaagtg taggcttacc    1020

tcaaataaat ggctaactta tacatatttt taaagaaata tttatattgt atttatataa   1080

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<210> 432
<211> 1047
<212> DNA
<213> Homo sapiens

<400> 432
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attcagtcag tctttggggg tttaaagaaa ttccaaagag tcatcagaag aggaaaaatg    120

aaggtaatgt ttttccgac aggtaaagtc tttgaaaata tgtgtaatat gtaaaacatt     180

ttgacacccc cataatattt ttccagaatt aacagtataa attgcatctc ttgttcaaga    240

gttccctatc actctcttta atcactactc acagtaacct caactcctgc cacaatgtac    300

aggatgcaac tcctgtcttg cattgcacta agtcttgcac ttgtcacaaa cagtgcacct    360

acttcaagtt ctacaaagaa aacacagcta caactggagc atttactgct ggatttacag    420

atgattttga atggaattaa taattacaag aatcccaaac tcaccaggat gctcacattt    480

aagttttaca tgcccaagaa ggccacagaa ctgaaacatc ttcagtgtct agaagaagaa    540

ctcaaacctc tggaggaagt gctaaattta gctcaaagca aaaactttca cttaagaccc    600

agggacttaa tcagcaatat caacgtaata gttctggaac taaagggatc tgaaacaaca    660

ttcatgtgtg aatatgctga tgagacagca accattgtag aatttctgaa cagatgggatt   720

acctttgtc aaagcatcat ctcaacactg acttgataat taagtgcttc ccacttaaaa    780

catatcaggc cttctattta tttaaatatt taaatttat atttattgtt gaatgtatgg     840

tttgctacct attgtaacta ttattcttaa tcttaaaact ataaatatgg atcttttatg    900

attcttttttg taagccctag gggctctaaa atggtttcac ttatttatcc caaaatattt    960

attattatgt tgaatgttaa atatagtatc tatgtagatt ggttagtaaa actatttaat   1020

aaatttgata aatataaaaa aaaaaaa                                        1047
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<210>   433
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<211>   1242
<212>   DNA
<213>   Homo sapiens

<400>   433
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gaagatgcaa gatgaagaaa gatacatgac attgaatgta cagtcaaaga aaaggagttc     120

tgcccaaaca tctcaactta catttaaaga ttattcagtg acgttgcact ggtataaaat     180

cttactggga atatctggaa ccgtgaatgg tattctcact ttgactttga tctccttgat     240

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caaataccaa gggaagtgtt attggttctc taatgagatg aaaagctgga gtgacagtta     480

tgtgtattgt ttggaaagaa aatctcatct actaatcata catgaccaac ttgaaatggc     540

ttttatacag aaaaaacctaa gacaattaaa ctacgtatgg attgggctta actttacctc     600

cttgaaaatg acatggactt gggtggatgg ttctccaata gattcaaaga tattcttcat     660

aaaggggacca gctaaagaaa acagctgtgc tgccattaag gaaagcaaaa ttttctctga     720

aacctgcagc agtgtttca aatggatttg tcagtattag agtttgacaa aattcacagt     780

gaaataatca atgatcacta tttttggcct attagtttct aatattaatc tccaggtgta     840

agattttaaa gtgcaattaa atgccaaaat ctcttctccc ttctccctcc atcatcgaca     900

ctggtctagc ctcagagtaa cccctgttaa caaactaaaa tgtacacttc aaaatttta     960

cgtgatagta taaaccaatg tgacttcatg tgatcatatc caggattttt attcgtcgct    1020

tatttatgc caaatgtgat caaattatgc ctgtttttct gtatcttgcg ttttaaattc    1080

ttaataaggt cctaaacaaa atttcttata tttctaatgg ttgaattata atgtgggtt    1140

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tcactcagct acaataaaca tcctgaatgt tttcttaaaa aa                        1242


<210>   434
<211>   2298
<212>   DNA
<213>   Homo sapiens

<400>   434
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tccccggccg tggcgcctcc gggccagacg cgctcgcagcc tccagcccgc ggcaagcggg     120

cggggcggcc gcgccacccc cggccccgcg ccagcagccc ctcgccgcgc gtccagcgtt     180

cccggccagc agcctcccca tacgcagtcc tgctggaccg ccccgtcgcg cccccccactc     240
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tgaactcaag tcaccgtgga gctccgccgc cccgaaactt tcacgcgagc gggaaatatg    300

ggatgtataa aatcaaaagg gaaagacagc ttgagtgacg atggagtaga tttgaagact    360

caaccagtac gtaatactga aagaactatt tatgtgagag atccaacgtc caataaacag    420

caaaggccag ttccagaatc tcagctttta cctggacaga ggtttcaaac taaagatcca    480

gaggaacaag gagacattgt ggtagccttg tacccctatg atggcatcca cccggacgac    540

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gcaaagtccc tttttaacaaa aaagaaggc ttcatcccca gcaactatgt ggccaaactc    660

aacaccttag aaacagaaga gtggtttttc aaggatataa ccaggaagga cgcagaaagg    720

cagcttttgg caccaggaaa tagcgctgga gctttcctta ttagagaaag tgaaacatta    780

aaaggaagct tctctctgtc tgtcagagac tttgaccctg tgcatggtga tgttattaag    840

cactacaaaa ttagaagtct ggataatggg ggctattaca tctctccacg aatcactttt    900

ccctgtatca gcgacatgat taaacattac caaaagcagg cagatggctt gtgcagaaga    960

ttggaagagg cttgtattag tcccaagcca cagaagccat gggataaaga tgcctgggag   1020

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tggatgggtt actataacaa cagtaccaag gtggctgtga aaaccctgaa gccaggaact   1140

atgtctgtgc aagccttcct ggaagaagcc aacctcatga agaccctgca gcatgacaag   1200

ctcgtgaggc tctacgctgt ggtcaccagg gaggagccca tttacatcat caccgagtac   1260

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ccaaagctca ttgacttttc tgctcagatt gcagagggaa tggcatacat cgagcggaag   1380

aactacattc accgggacct gcgagcagct aatgttctgg tctccgagtc actaatgtgc   1440

aaaattgcag attttggcct tgctagagta attgaagata atgagtacac agcaagggaa   1500

ggtgctaagt tcccctattaa gtggacggct ccagaagcaa tcaactttgg atgtttcact   1560

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gaaaaggcag aagagagacc aacgtttgac tacttacaga gcgtcctgga tgatttctac   1800

acagccacgg aaggcaata ccagcagcag ccttagagca cagggagacc cgtccatttg   1860

gcaggggtgg ctgcctcatt tagagaggaa aagtaaccat cactggttgc acttatgatt   1920

tcatgtgcgg ggatcatctg ccgtgcctgg atcctgaaat agaggctaaa ttactcagga   1980

agaacaccct ctaaatggga aagtattctg tactcttaga tggattctcc actcagttgc   2040
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aacttggact tgtcctcagc agctggtaat cttgctctgc ttgacaacat ctgagtgcag      2100

ccgtttgaga agaaaacatc tattctctcc aaaaatgcac ccaactagct ctatgtttac      2160

aaatggacat aggactcaaa gtttcagaga ccattgcaat gaatccccaa taattgcaga      2220

actaaactca tttataaagc taaaataacc ggatatatac atagcatgac atttctttgt      2280

gctttggctt acttgtttt                                                   2298
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<211> 2308
<212> DNA
<213> Homo sapiens

<400> 435
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tcctccggcg cgatgccaaa aagaggctga cggcaactgg gccttctgca gagaaagacc      120

tccgcttcac tgccccggct ggtcccaagg gtcaggaaga tggattcata cctgctgatg      180

tggggactgc tcacgttcat catggtgcct ggctgccagg cagagctctg tgacgatgac      240

ccgccagaga tcccacacg cacattcaaa gccatggcct acaggaagg aaccatgttg        300

aactgtgaat gcaagagagg tttccgcaga ataaaaagcg ggtcactcta tatgctctgt      360

acaggaaact ctagccactc gtcctgggac aaccaatgtc aatgcacaag ctctgccact      420

cggaacacaa cgaaacaagt gacacctcaa cctgaagaac agaaagaaag gaaaaccaca      480

gaaatgcaaa gtccaatgca gccagtggac caagcgagcc ttccaggtca ctgcagggaa      540

cctccaccat gggaaaatga agccacagag agaatttatc atttcgtggt ggggcagatg      600

gtttattatc agtgcgtcca gggatacagg gctctacaca gaggtcctgc tgagagcgtc      660

tgcaaaatga cccacgggaa gacaaggtgg acccagcccc agctcatatg cacaggtgaa      720

atggagacca gtcagtttcc aggtgaagag aagcctcagg caagcccga aggccgtcct       780

gagagtgaga cttcctgcct cgtcacaaca acagatttc aaatacagac agaaatggct       840

gcaaccatgg agacgtccat atttacaaca gagtaccagg tagcagtggc cggctgtgtt      900

ttcctgctga tcagcgtcct cctcctgagt gggctcacct ggcagcggag acagaggaag      960

agtagaagaa caatctagaa aaccaaaaga acaagaattt cttggtaaga agccgggaac     1020

agacaacaga agtcatgaag cccaagtgaa atcaaaggtg ctaaatggtc gcccaggaga     1080

catccgttgt gcttgcctgc gttttggaag ctctgaagtc acatcacagg acacggggca     1140

gtggcaacct tgtctctatg ccagctcagt cccatcagag agcgagcgct acccacttct     1200

aaatagcaat ttcgccgttg aagaggaagg gcaaaaccac tagaactctc catcttattt     1260

tcatgtatat gtgttcatta aagcatgaat ggtatggaac tctctccacc ctatatgtag     1320
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tataaagaaa agtaggttta cattcatctc attccaactt cccagttcag gagtcccaag      1380

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atcctctaag ctaacccct tctactgagc cttcagtctt gaatttctaa aaaacagagg       1620

ccatggcaga ataatctttg ggtaacttca aaacggggca gccaaaccca tgaggcaatg      1680

tcaggaacag aaggatgaat gaggtcccag gcagagaatc atacttagca aagttttacc      1740

tgtgcgttac taattggcct ctttaagagt tagtttcttt gggattgcta tgaatgatac      1800

cctgaatttg gcctgcacta atttgatgtt tacaggtgga cacacaaggt gcaaatcaat      1860

gcgtacgttt cctgagaagt gtctaaaaac accaaaaagg gatccgtaca ttcaatgttt      1920

atgcaaggaa ggaaagaaag aaggaagtga agagggagaa gggatggagg tcacactggt      1980

agaacgtaac cacggaaaag agcgcatcag gcctggcacg gtggctcagg cctataaccc      2040

cagctcccta ggagaccaag gcgggagcat ctcttgaggc caggagtttg agaccagcct      2100

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<212>   DNA
<213>   Homo sapiens

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cacctgagcc cggatgcttc tccatgagac acatctcctc catactcagg actcctctcc      480

gcagttcctg tcccttctct taatttaatc ttttttatgt gccgtgttat tgtattaggt      540

gtcatttcca ttatttatat tagtttagcc aaaggataag tgtcctatgg ggatggtcca      600
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ctgtcactgt ttctctgctg ttgcaaatac atggataaca catttgattc tgtgtgtttt      660

ccataataaa actttaaaat aaaatgcaga cagttta                               696


<210>   437
<211>   116
<212>   DNA
<213>   Homo sapiens

<400>   437
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ttaaagtggc gttaataaga taagtaataa taaagaattc taacatccat gtcaaa          116


<210>   438
<211>   3426
<212>   DNA
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aagtgggaga aacaggtcag ccaaaagaaa aagcaaaaga atgggaaaaa acatcaaaaa     360

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ccaaccatac aaaaattcct tttcccgaag gaaaagggct ttctcaataa gcctcagctt   1860

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cctctcccat cacttcccta catggagtat atgtcaagcc ataattgttc ttagtttgca    480

gttacactaa aaggtgacca atgatggtca ccaaatcagc tgctactact cctgtaggaa    540

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<212> DNA
<213> Homo sapiens

<400> 454
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gatgctggtg gacttggcca agtccagggg cgtggaggcc gcccgggagc ggatgttcaa     360

tggtgagaag atcaactaca ccgagggtcg agccgtgctg cacgtggctc tgcggaaccg     420

gtcaaacaca cccatcctgg tagacggcaa ggatgtgatg ccagaggtca acaaggttct     480
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cattgatgga actcacattg ccaaaaccct ggcccagctg aacccogagt cctccctgtt    720

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<211>  1285
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<213>  Homo sapiens

<400>  455
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<211>   1188
<212>   DNA
<213>   Homo sapiens

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tgggagtgga ccacagggta cgccaaggcc aacgcacaga ctgaccgagt ggccctgagg       300
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aaagtgtgag acagcttcct tgtgtgggac tgagaagcaa gatatcaatg tagcagaatt      1140

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<212> DNA
<213> Homo sapiens

<400> 457
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atatatataa gaaacaagag ttctattta gcacaaaggc attttatatt atttattgaa      480

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agtttgttat ttaaagaaat ggcagtcctt cctgttctta atacaataaa attgaaataa      600

tgcacctagt aatgtggccg acatctcttc tcaccaccat ggactgtttt caacaacagt      660

tgatcttctg gtctgtgctg agaggcgcat gcatgtcttt cgtcacgtcg ggcagcacac      720
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caaatgatgt catcacaatg gatcccaaag acaattggtc aaaagatgca aatgatacac    480

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<212>  DNA
<213>  Homo sapiens

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caccggaatt tttgacaaga ataaaattat ttctgaaacc cactccaaac acagtgcact      360

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gaaccatgtc tattaattta attatttaat aatatttata ttaaactcct tatgttactt     2040

aacatcttct gtaacagaag tcagtactcc tgttgcggag aaaggagtca tacttgtgaa     2100

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tatatatggg ttttgtaaag atggttttac acactacaga tgtctatact gtgaaaagtg    1920

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gctttaatgg attataccca gagcactttg aacaaaggtc agtggggatt gttgaataca    2100

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ccatctccaa aaaaaaaaaa aaaa                                          3144
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<213>  Homo sapiens

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cgcccagctt ggaggtgcta actccagagg ccagcatcag caactgggca cagaaaggag      180

ccgcctgggc agggaccatg gcacggccac atccctggtg gctgtgcgtt ctggggaccc      240

tggtggggct ctcagctact ccagcccca agagctgccc agagaggcac tactgggctc      300

agggaaagct gtgctgccag atgtgtgagc caggaacatt cctcgtgaag gactgtgacc      360

agcatagaaa ggctgctcag tgtgatcctt gcataccggg ggtctccttc tctcctgacc      420

accacacccg gccccactgt gagagctgtc ggcactgtaa tctctggtctt ctcgttcgca      480
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ctacccactg gccaccccaa agatccctgt gcagctccga ttttattcgc atccttgtga    780

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<213>    Homo sapiens

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atccccagtg cactatggga ctgagtaaca ttctctttgt gatggccttc ctgctctctg    180

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gcatccacca gatgaattct gaactgtcag tgcttgctaa cttcagtcaa cctgaaatag    540

taccaatttc taatataaca gaaaatgtgt acataaattt gacctgctca tctatacacg    600

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gtggaaccaa cacaatggag agggaagaga gtgaacagac caagaaaaga gaaaaaatcc     1020

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gatcactaag ggatgggggca gtctctgccc aaacataaag agaactctgg ggagcctgag     2520

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gcttcaaagg tgaggggaa actgtaggcg gtggagacag ggctggggt aggagggtta    180

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gatgggattg aaggggcttc taatgaccca gatatggaaa cagaagacaa aattgtaagc   1320

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aaagatgatt tgtacaacag ggaaggatac ggttttaaag gtt                       223


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tggtggtctt agggaaggct gagttcttgg taaagaactc tanattcctn tagcanatat    120

anatcatctt tctnntaagt tcatccttnt tngcacggnc cttagcctnc antgcacccc    180

cnaacttgtt agcggcnccc ttgntcacat catgcagctc cttaatacaa gccatccaca    240

tctcccgctt atcctcnggt acaatgtagt tctcatacat gctctgcata gttagcccaa    300


<210>  478
<211>  363
<212>  DNA
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<213> Homo sapiens

<400> 478
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ccgtcttctc cgccttcgcc tgatgcgctg catccagcct ctgtttcat caccccctgct   180

ttgcccccaa ggttgctgat ctcttgagta tgactcttct ggtaccaatc tctcagaagc   240

cccactggat ggaggccccg gcccaggggtc ctgatcatgc tcgccggtag tctgtacatt   300

atctccccgc tcattgtcgg gtgactgtct agagtccccc tgtccttcaa atgattccat   360

ggt   363

<210> 479
<211> 600
<212> DNA
<213> Homo sapiens

<400> 479
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aacatccagg cttgggcaca tctgcttcaa caggaggcgc agcctgtcat tttcagatga   120

tttggcagca gccacctcac ggtagtgctg cagcagttgc ttaaacttgg cccggcattt   180

tctggaagcc accgattct tgtatcgctt tatttctagt tcagaatcgc attcctccag   240

cgattctggc tgttgtggtt tccgtgtgcg tcgtgccggg gcagccactg gtgcaggctg   300

tggaacacca atgtctgcta gctgttgtcc ttggttagcc ccggggcaag caaacaccac   360

tgctgctgct gtttgaacag tagaattgtc tccaggttga ggtgcttctc ccccggcttg   420

gttagtctgt tgattctggg ttatgtcgga gactgggaac agctgaggtg ctgcataagc   480

ttgataagca ttctcaggag caggctgagg ggcagaaaac cacgacccag tcggagcggt   540

tgaaacatga taggcagtta gctggccttg tggcagaggc tctggcagca ccggccacag   600

<210> 480
<211> 146
<212> DNA
<213> Homo sapiens

<400> 480
ccctgaaggt gaaccgctta ccacctcctc ttcttgctgg acgaggaccc ttctacggac   60

tcgtctgggt tcttggcccc ctctggtagg actgggcgac cggtgccttc ttaggagctg   120

tccgagggga ccctctggcc cgatac   146

<210> 481
<211> 66
<212> DNA

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<213>  Homo sapiens

<400>  481
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ccagag                                                                 66


<210>  482
<211>  176
<212>  DNA
<213>  Homo sapiens

<400>  482
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acatgctgaa aaaatatacc cagacggaag agaaattcac tggcgccttt aatatgatgg     120

gaggatgttt gcagaatgcc ttagatatct tagataaggt tcatgagcct ttcgag         176


<210>  483
<211>  185
<212>  DNA
<213>  Homo sapiens


<220>
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<223>  n is a, c, g, t or u

<220>
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<222>  (62)..(62)
<223>  n is a, c, g, t or u

<220>
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<222>  (110)..(110)
<223>  n is a, c, g, t or u

<220>
<221>  misc_feature
<222>  (137)..(137)
<223>  n is a, c, g, t or u

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angttttgag ggattcttcg gccaactctg gaaacagcgg gtctcccagn ctcagctgac     120

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cgggc                                                                 185


<210>  484
<211>  641
<212>  DNA
<213>  Homo sapiens
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ccagaaggag acaacaatgt ccctgctacc cgtgccatac acagaggctg cctctttgtc      120

tactggttct actgtgacaa tcaaagggcg accacttgcc tgtttcttga atgaaccata      180

tctgcaggtg gatttccaca ctgagatgaa ggaggaatca gacattgtct tccatttcca      240

agtgtgtcttt ggtcgtcgtg tggtcatgaa cagccgtgag tatgggggcct ggaagcagca    300

ggtggaatcc aagaatatgc cctttcagga tggccaagaa tttgaactga gcatctcagt      360

gctgccagat aagtaccagg taatggtcaa tggccaatcc tcttacacct ttgaccatag      420

aatcaagcct gaggctgtga agatggtgca agtgtgggaga gatatctccc tgaccaaatt    480

taatgtcagc tatttaaaga gataaccaga cttcatgttg ccaaggaatc cctgtctcta     540

cgtgaacttg ggattccaaa gccagctaac agcatgatct tttctcactt caatccttac     600

tcctgctcat taaaacttaa tcaaacttca aaaaaaaaaa a                          641


<210>  485
<211>  2165
<212>  DNA
<213>  Homo sapiens

<400>  485
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tgacagctca gtcagttgag ctctgtgtgc caggcgctcg ggaggggta gctcttctag      120

tagtgctcgg cgtcacagacat ggcggaggcg atggatttgg gcaaagaccc caacgggccc   180

acccattcct cgactctgtt cgtgagggac gacggcagct ccatgtcctt ctacgtgcgg     240

cccagcccgg ccaagcgtcg gctgtcgacg ctcatcctgc acggcggcgg caccgtgtgc     300

cgagtgcagg agcccggggc cgtgctgctg gcccagcccg gggaggcgct ggccgaggcc     360

tcgggtgatt tcatctccac gcagcacatc ctggactgcg tggagcgcaa cgagaggctg     420

gagctggagg cctatcggct gggccccgcc tcggcggcgg acaccggctc ggaagcaaag    480

cccgggggccc tggccgaggg cgccgcggag ccggagccgc agcggcacgc cgggcggatc     540

gccttcacgg atgcggacga cgtagccatc cttacctacg tgaaggaaaa tgcccgctcg     600

cccagctccg tcacaggtaa cgccttgtgg aaagcgatgg agaagagctc gctcacgcag     660

cactcgtggc agtccctgaa ggaccgctac ctcaagcacc tgcggggcca ggagcataag     720

tacctgctgg gggacgcgcc ggtgagcccc tcctcccaga agtcaagcg gaaggcggag     780

gaggaccgg aggccgcgga tagcgggga ccacagaata agagaactcc agatttgcct     840

gaagaagagt atgtgaagga agaaatccag gagaatgaag aagcagtcaa aaagatgctt     900
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gtggaagcca cccgggagtt tgaggaggtt gtggtggatg agagccctcc tgattttgaa        960

atacatataa ctatgtgtga tgatgatcca cccacacctg aggaagactc agaaacacag       1020

cctgatgagg agtaagaaga agaagaagaa aaagtttctc aaccagaggt gggagctgcc       1080

attaagatca ttcggcagtt aatggagaag tttaacttgg atctatcaac agttacacag       1140

gccttcctaa aaaatagtgg tgagctggag gctacttccg ccttcttagc gtctggtcag       1200

agagctgatg gatatcccat ttggtcccga caagatgaca tagatttgca aaaagatgat       1260

gaggatacca gagaggcatt ggtcaaaaaa tttggtgctc agaatgtagc tcggaggatt       1320

gaatttcgaa agaaataatt ggcaagataa tgagaaaaga aaaagtcat ggtaggtgag       1380

gtggttaaaa aaaattgtga ccaatgaact ttagagagtt cttgcattgg aactggcact       1440

tatttctga ccatcgctgc tgttgctctg taagtcctag atttttgtag ccaagcagag       1500

ttgtagaggg ggataaaaag aaaagaaatt ggatgtattt acagctgtcc ttgaacaagt       1560

atcaatgtgt ttatgaaagg aagatctaaa tcagacagga gttggtctac atagtagtga       1620

tccattgttg gaatggaacc cttgctatag tagtgacaaa gtgaaaggaa atttaggagg       1680

cataggccat ttcaggcagc ataagtaatc tcctgtcctt tggcagaagc tcctttagat       1740

tgggatagat tccaaataaa gaatctagaa ataggagaag atttaattat gaggccttga       1800

acacggatta tccccaaacc cttgtcattt ccccagtga gctctgattt ctagactgct       1860

ttgaaaatgc tgtattcatt ttgctaactt agtatttggg taccctgctc tttggctgtt       1920

cttttttggg agcccttctc agtcaagtct gccggatgtc tttcttacc taccctcag       1980

ttttccttaa aacgcgcaca caactctaga gagtgttaag aataatgtta cttggttaat       2040

gtgttattta ttgagtattg tttgtgctaa gcattgtgtt agatttaaaa aattagtgga       2100

ttgactccac tttgttgtgt tgttttcatt gttgaaaata aatataactt tgtattcgaa       2160

aaaaa                                                                   2165
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<210>   486
<211>   1098
<212>   DNA
<213>   Homo sapiens

<400>   486
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cagacctggg cgggctccca ctccatgagg tatttcttca catccgtgtc ccggccccggc       120

cgcgggggagc cccgcttcat cgccgtgggc tacgtggacg acacgcagtt cgtgcggttc       180

gacagcgacg ccgcgagcca gaggatggag ccgcgggcgc cgtggatgaga gcaggagggg       240

ccggagtatt gggaccagga gacacggaat gtgaaggccc agtcacgac tgaccgagtg       300
```

```
gacctgggga  ccctgcgcgg  ctactacaac  cagagcgagg  ccggttctca  caccatccag      360

ataatgtatg  gctgcgacgt  ggggtcggac  gggcgcttcc  tccgcgggta  ccggcaggac      420

gcctacgacg  gcaaggatta  catcgccctg  aacgaggacc  tgcgctcttg  gaccgcggcg      480

gacatggcgg  ctcagatcac  caagcgcaag  tgggaggcgg  cccatgaggc  ggagcagttg      540

agagcctacc  tggatggcac  gtgcgtggag  tggctccgca  gatacctgga  gaacgggaag      600

gagacgctgc  agcgcacgga  cccccccaag  acacatatga  cccaccaccc  catctctgac      660

catgaggcca  ccctgaggtg  ctgggccctg  ggcttctacc  ctgcggagat  cacactgacc      720

tggcagcggg  atgggtgagga  ccagacccag  gacacgggag  tcgtggagac  caggcctgca      780

ggggatggaa  ccttccagaa  gtgggcggct  gtggtggtgc  cttctggaga  ggagcagaga      840

tacacctgcc  atgtgcagca  tgagggtctg  cccaagcccc  tcaccctgag  atgggagctg      900

tcttcccagc  ccaccatccc  catcgtgggc  atcattgctg  gcctggttct  ccttggagct      960

gtgatcactg  gagctgtggt  cgctgccgtg  atgtggagga  ggaagagctc  agatagaaaa     1020

ggagggagtt  acactcaggc  tgcaagcagt  gacagtgccc  agggctctga  tgtgtccctc     1080

acagcttgta  aagtgtga                                                      1098
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<210> 487
<211> 242
<212> DNA
<213> Homo sapiens

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<400> 487
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caacaagaag  gttgaattgt  tacccagtaa  ctttcattct  tcttagggta  tgaaaattgg      120

ccactgaatg  ttctgttcca  aaattcccta  agcaagttaa  gctaaatatc  tggattaaaa      180

gatttatttt  gattttaaaa  tggacactac  atatctggct  tatttagtct  gccctcgtgc      240

cg                                                                          242
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<210> 488
<211> 3415
<212> DNA
<213> Homo sapiens

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<400> 488
ccccctcccc  tcctgcagcc  tcctgcgccc  cgccgagctg  gcggatggag  ctgcgcagcg       60

ggagcgtggg  cagccaggcg  gtggcgcgga  ggatggatgg  ggacagccga  gatggcggcg      120

gcggcaagga  cgccaccggg  tcggaggact  acgagaacct  gccgactagc  gcctccgtgt      180

ccacccacat  gacagcagga  gcgatggccg  ggatcctgga  gcactcggtc  atgtacccgg      240

tggactcggt  gaagacacga  atgcagagtt  tgagtccaga  tcccaaagcc  cagtacacaa      300
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gtatctacgg agccctcaag aaaatcatgc ggaccgaagg cttctggagg cccttgcgag    360

gcgtcaacgt catgatcatg ggtgcagggc cagcccatgc catgtatttt gcctgctatg    420

aaaacatgaa aaggacttta aatgacgttt tccaccacca aggaaacagc cacctagcca    480

acggtatttt gaaagcgttt gtctggagtt agaaagttct cttcttcaac acgtccctcc    540

ccagggtgtt cctccctgtg acccagccgc ctcgacttcg gcccgcttgc tcacgaataa    600

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ttttgtttt aaacattcaa aagcaattaa tgatcagaca taggagaaac cctgaataga    840

aacaaaact ttgaatgctg gattcaaaaa agaaaaaaag ttatctggac agcttcttg    900

agactattta aaaactggta caacaggtct ctacaacgcc aagatctaac taagctttaa    960

aaggtcaaga agttttatgg ctgacaaagg actcgcgcaa cgcagaaggc ctttcccacc   1020

ttaagcttcc ggggatctgg gaattttacc cccattctct tctgttttgtc tgagtctcat   1080

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gttcttgaag ccaggcctga cccgactctc agatggggtc agtcccgtcg ctttgcagac   1920

tgaccctgga aatctacaaa atgcagattt tcctgatttc ctcttctctt gcccagtttt   1980

tttttttttt tttttttttt ttttaaagc ctggattgta accagatttt cttttttccc   2040

ccttctcagc tgtagatatg atatctcctt tcagggcccc agcttaaggg caaagtgagt   2100
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taatgtgtag acaaaggcga gggacaagag agagttaaca tctagacagt ggaaaaagcc    2160

atggtgtgtg gtttctggga accaccaaca cttgcaggtt tagcttttttc ccagggttga    2220

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atttttaggtt ccaggaactt cctgagaaca cccgatcgca gagggtaatt ttctggagtt    2460

tgtttttgcag ggatagctgg gagtatggcc accctgctcc acgatgcggt aatgaatcca    2520

gcagaagtgg tgaagcagcg cttgcagatg tacaactcgc agcaccggtc agcaatcagc    2580

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aatgccttcc ggacggtgta ccagctcaac ggcctggccg gctacttcaa aggcatccag    2940

gcgcgtgtca tctaccagat gccctccacc gccatttctt ggtctgtcta tgagttcttc    3000

aagtactttc tcaccaagcg ccagctggaa aatcgagctc catactaaag gaagggatca    3060

tagaatcttt tcttaaagtc attctctgcc tgcatccagc cccttgccct ctcctcacac    3120

gtagatcatt tttttttttg cagggtgctg cctatgggcc ctctgctccc caatgcctta    3180

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gggcagaatg tagctttttct gcttcactgt ggcagcctcc tccctggatc cttagatccc    3360

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<210> 489
<211> 2473
<212> DNA
<213> Homo sapiens

<400> 489

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tgcctcgccc gcggacaccc tggccgtgga caccctggcc gtgggcaccc gcggggcgcg     180

gcgcgggcgc tgcgcggcgg cggcggcggc atgaaggtca cgtcgctcga cggcgccag     240

ctgcgcaaga tgctccgcaa ggaggcggcg gcgcgctgcg tggtgctcga ctgccggccc     300
```

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tatctggcct tcgctgcctc gaacgtgcgc ggctcgctca acgtcaacct caactcggtg    360

gtgctgcggc gggcccgggg cggcgcggtg tcggcgcgct acgtgctgcc cgacgaggcg    420

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tcgctactcg cttgcctacc cgccggcccg cgggtctact tcctcaaagg gggatatgag    600

actttctact cggaatatcc tgagtgttgc gtggatgtaa aacccatttc acaagagaag    660

attgagagtg agagagccct catcagccag tgtggaaaac cagtggtaaa tgtcagctac    720

aggccagctt atgaccaggg tggcccagtt gaaatccttc ccttcctcta ccttggaagt    780

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gaagacagcc acacggctga cattagctcc cactttcaag aagcaatagg cttcattgac    960

tgtgtcaggg aaaagggagg caaggtcctg gtccactgtg aggctgggat ctcccgttca   1020

cccaccatct gcatggctta ccttatgaag accaagcagt tccgcctgaa ggaggccttc   1080

gattacatca agcagaggag gagcatggtc tcgcccaact ttggcttcat gggccagctc   1140

ctgcagtacg aatctgagat cctgccctcc acgcccaacc cccagcctcc ctcctgccaa   1200

ggggaggcag caggctcttc actgataggc catttgcaga cactgagccc tgacatgcag   1260

ggtgcctact gcacattccc tgcctcggtg ctggcaccgg tgcctaccca ctcaacagtc   1320

tcagagctca gcagaagccc tgtggcaacg gccacatcct gctaaaactg ggatggagga   1380

atcggcccag ccccaagagc aactgtgatt tttgttttta agactcatgg acatttcata   1440

cctgtgcaat actgaagacc tcattctgtc atgctgcccc agtgagatag tgagtggtca   1500

ccaggcttgc aaatgaactt cagacggacc tcagggtagg ttctcgggac tgaaggaagg   1560

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acttgtctca ttccacctct tctcagagca actcttcctt tgggaaaaga gttcttcaga   2100

tcatagacca aaaaagtcat accttcgagg tggtagcagt agattccagg aggagaaggg   2160
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tacttgctag gtatcctggg tcagtggcgg tgcaaactgg tttcctcagc tgcctgtcct   2220

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aactgtggac ttctgggatt tgcagatttt gcaacgtggt actacttttt tttcttttttg  2340

tctgttagtt atttctccag gggaaaaggc aataattttc taagacccgt gtgaatgtga   2400

agaaaagcag tatgttactg gttgttgttg ttgttcttgt tttttatatg taaaataaaa   2460

atagtgaaag gag                                                       2473
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<210> 490
<211> 1216
<212> DNA
<213> Homo sapiens

<400> 490
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accagctgtg ggttcatgca gcagatccag aagggtagtt atcctgatgc gattttgcag     360

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accaaaggca aaatcccaaa cttgttacct gaaggttctg tagatgggga taccaggatg     660

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<212> DNA
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tgtagcctca agaatccgtc cccacgtcca cccatcccga gcactccaca cgccataaca    180
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ctgcaattgc acgttctgc cctttacaat aaagaaacac acactttcct ttcaccaccc   180

acacccacca aaaataccac cacactccaa cacaccccac gaagaaagcg agaaagccca   240

aaactgggcc ccccaccaca accgcacccc cacgaatctg tcatacatcc acaagacacc   300

cgggccctct gagcacccac ggcgaacggc cgccaagccg ccaccccct cccaggcggc   360

270

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gaaacggaca ggctaacgac gcgaagtacc tcacccaccc gaccgaacgc gatccacggt         660

cccgtaagcg ctaattccag actacacccc catagctcgc cgcaatggtc tgcacgtcca         720

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<213>  Homo sapiens

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cttagatctt ggttctggag atgaaaaagt gcggaaaagt gatgttaaaa agtttctgac         240

tccaggatat tcaacctctg gccacgtaga atttatacaca attagtgtag agaggggaat        300

gtcatgggag gaagctacca agatttgggc tgagctgaca ggaccagacg atggctttta         360

cttgtcattg caaataagga acaacaagaa aactgccatc ttagttaaag aagtgaatcc         420

taaaaagaaa cttttcttag tttatcgacc aaatactggg aagcagctca aattagaaat        480

ttatgctgat ctaaaaaaga aatataagaa ggtcgtctca gatgatgccc tgatgcactg         540

gttagatcag tataattcat ctgcagatac ttgtactcat gcttattggc gcggcaattg        600

caaaaaagca agcttggggc tagtttgtga aataggtctt cgttgccgta catattatgt        660

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ccagtctcaa cagcttgcgg tccaacagaa acagctatgg caacagcatc accctcagag         900

catcaccaac ttgagcaacg catgaagaac agacaggttt caacatggat ggatctgaaa         960

tgctgttgaa gcatatcatt tgcataaaaa tcagggacag tttccaaaga attatatatt       1020
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271

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catgctgaaa caagattaac acaggagtcg agtaacagag agaaacattt gttagatgta     1560

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gctttgtcac tcataaaaag gaaaccatac ctgagttgta gacaatgagg aaacacttga     1920

ggcttctgct gtgtgttctt ttgttattgt tgttattgtt gttactcagt aacttgaata     1980

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aatgtgaata gacacttatc tatataatat gggtaagttt tgtttcgcct ataatgatg     2100

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ttcttttttt cttttttttc tttttttttt tttttgcttc cacaggttgc actattgaaa     2220

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<212>  DNA
<213>  Homo sapiens

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gcatgcgaat ctttgcgcct aatcatgtcg tcgccaagtc ccgcttctgg tactttgtat      180

ctcagttaaa gaagatgaag aagtcttcag gggagattgt ctactgtggg caggtgtttg      240

agaagtcccc cctgcgggtg aagaacttcg ggatctggct gcgctatgac tcccggagcg      300
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gcacccacaa catgtaccgg gaataccggg acctgaccac cgcaggcgct gtcacccagt      360

gctaccgaga catgggtgcc cggcaccgcg cccgagccca ctccattcag atcatgaagg      420

tggaggagat cgcggccagc aagtgccgcc ggccggcgt caagcagttc cacgactcca        480

agatcaagtt cccgctgccc caccgggtcc tgcgccgtca gcacaagcca cgcttcacca       540

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<213>    Homo sapiens

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acaaatccca ggagcacttc acggcactag gaagcttta ttttcttcat gagtccttaa       300

aaaacatcta ccagtttgac tttaaagcta agaagtatag aaaggtcgct ggcaaagaga      360

tctactcgga taccttagag agcacgccca tgctggagaa ggagaagttt cgcagagtac      420

ttccccgagt gcaaatggtc aagaaaaggc ttcatccgga cgaggtggtg attgcagact      480

gtgcctttga cttggtgaat atccatcttt tccatgatgc ttccaatctg gtcgcctggg      540

aaacaagccc ttccgtgtac tcgggaatcc ggcacaaggc actgggctac gtgctggaca      600

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gggccgccga caccaatgaa gtggtgaagc tcatatttcg tgagtcggac aacgaccgga      780

aggttatgct ccagttagaa aagaaactct tcgactactt caaccaggag gttttccgag      840

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cgtctgtcta tgtgacatta agtagaaata ttggtttttt tttttttta aataagtcac      1440

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ataaatctta ccaaaactta tgctaaatat actttccagt atgaacgcac aggagagtcc      1860

catcagcagg cggcattgga gtctaggagc tcagctgtgt gtccatcaac acacaaattc      1920

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gagaaacaaa actgtacatt tcctcattgc tccgctacag acaacccatg tcataacctt      2280

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tggctgagag tgaggaccgc tccctgagga tcgttctggt agggaaaact ggaagtggga       180

aaagtgcaac agcgaacacc atccttggag aggaaatctt tgattctaga attgctgccc       240
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aagctgttac caagaactgt caaaaagcat cccgggaatg gcagggggaga gaccttcttg      300

ttgtagacac tccagggctc tttgacacca aggagagcct ggacaccacc tgcaaggaaa      360

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agtcagccat gaagcacatg gtcatcttgt tcactcgcaa agaagagttg gagggccaga      540

gcttccatga cttcatagca gatgcggatg tgggcctaaa aagcatcgtc aaggagtgcg      600

ggaaccgctg ctgtgccttt agcaacagca agaaaaccag taaggcagag aacgaaagtc      660

aagtgcagcg agttgggtgg aagctgatag agcaacacat ggtgcagtgc aacgaacggg      720

ccttactttt ctgatgacct ata                                             743
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<211>  346
<212>  DNA
<213>  Homo sapiens

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atccggaaat atggcctcaa tatgtgccgc cagtgtttcc gtcagtacgc gaaggatatc      180

ggtttcatta agttggacta aatgctcttc cttcagagga ttatccgggg catctactca      240

atgaaaaacc atgataattc tttgtatata aaataaacat ttgaaaaaa aaaaaaaaaa      300

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa                    346
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<211>  397
<212>  DNA
<213>  Homo sapiens

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ccaaacagtt caacctacac gaacaggcaa ccatgcctgg tgtatttatt aaaatgtagc      120

tactagaata tttaaaattc acatgtgcct cacatattat ttcttagaga attgcctcat      180

ttttgaaatc tcaggctgcc tgctctaaaa cctggatgtg ccaggaaagt aaaaaatctg      240

aaatttaa ataattgtca ttatattgct tccatgtatg aataacacat atatattttt      300

cataaaataca aataatcctca cacacaaatg aaaatgcaag tattttacag tcagggccag      360

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<213>  Homo sapiens

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gtgggtgtgc aattctttga ggctccacgc ggccttgacg ccttcgttac aagcatcggc       360

tgtgcgctgc gccacttcgg gtggatgtgt cacgggcatg tgtgctcca tgaggaaggg        420

agtggagagg gccaggttgc acatggtgcc caggcgcaca cgcaccgcat ccacctcact       480

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tgccaaataa aacagaaaca ccagtttctc aggaggatgc cttgaatctc atgaacgaga       180

atatagacat tctggagaca gcgatcaagc aggcagctga gcagggtgct cgaatcattg       240
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tgactccaga agatgcactt tatggatgga aatttaccag ggaaactgtt ttcccttatc    300

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tggcaaattt gggggacaaa aagccatgta attcccgtga ctccacatgt cctcctaatg    480

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tgactttcaa caccgcattt ggaaggtttg gcattttcac gtgctttgat atattcttct    660

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accttacagt ctgtcaaaag gagctttgct gtcatttaag ctacagaatg ttacaaaaag   1140

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cagagtatgt ttttcctgaa gtgctactta ccgaaattca tctgtcacct ggaaaatttg   1380

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attcagcaat aacttacctg ctaatattca tattattaat gatcatagct ttgcaaaata   1560

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ccagtgagtc ctaaatattt tttctcatca ataattattt tttaagtatt atgataatgt   1740

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tgtgtatggg ggacttgtat gtatgggagt gaggagtttc agggccattg caaacatagc   1920

tgtgcccttg aagagaatag taatgatggg aatttagagg tttatgactg aattcccttt   1980

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<213>  Homo sapiens

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gaacaagtcc aactttaat ggtgcaacag taactgtcta tcaccagcca gcacccatcg      660

ctcagttgtc tccagctgtt agccagaagc ctcccttcca gtcagggatg cattatgttc     720

aagataaatt atttgtgggt ctagaacatg ctgtaccac ttttaatgtc aaggagaagg      780

tggaaggtcc aggctgctcc tatttgcagc acattcagat tgaaacaggt gccaaagtct     840

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aagagagaga gagggacagg cagttgatgc ctccaccagc ctttccagtg actggaataa    1620
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cctaaggtca ggagttcaag accagcttgg ccaacatagt gaaatcccat ctctactaaa   1860

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tgattttgag gtctccaaat ttaaaggggga aagggcagga tgttgagaag tacacaattg   1560

tcatgtaaga ggtgggtagg ggcaaatagt tatttatgcc tttggctcag tgaatctgca   1620

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atcctattta gaaaccaaaa gggggggagac aggtttgcat gacccagttc ccagcttgac     1920

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ttcttttttc tgtaaaatct tttggagaaa gcattttaaa aggaagacga gttcctggcc      2040

tcaggttggt ttttcctccc tttttttgagc tgctttctta ttgctaggat ggtttattcc    2100

tagaagttca ggtcccccagt ctctaggaag gctcatttct aagaggtcat gtcccatgaa      2160

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<213>   Homo sapiens

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gggtccctca tagaggagtg ccaccctcca cactggccac gctgggctgc cccagagcgg      240

ccagaaagga aggtgggagc tagccccatc ctcactcaga ggccggaagg aggaagatgg      300

catctcgcca acttcagagc cgaatggcct ctagccacac tgcttccaga ccccagacgg      360

ggcagcagca gcagttccca gatgagcacc cattgttgca gctaggaccc accaaggatg      420

ggactcctgg agtcaggtgc acaccaggta acccaggacc acgcctc                   467
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<213>   Homo sapiens

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gccgtcacac tgatcaaagg cactgcctgg cagtcatcta tgttagtgat gagtaaagta      180

gacaggaaat tcattgttgc ttgataaatg tcctctccaa gtcaccccat cttgggaaac      240

acaccaccta tttacccagt tgcccaagtc aaatgcagga gtcacccctg gttcttctct     300

ttctgtcact ctgtctcccc aacccccaatc cagctcatca gcaagtcccc caagcctggc     360
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<213>  Homo sapiens

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aaaggggaat ttccatgccg tctacaggga tgacctgaag aaattgctag agaccgagtg        180

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aaaaaaaa                                                               428
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ctctgaccgg ttgatggcct tgagcgagat gaaatcatga aattgagtca aatcaatttg        180

acattgaaat gacaagagga aactcttaaa tacataaaaa caagtctcta tttgcctagg       240

atagatactg tcttaaaaat aaagactgaa cctagatgtt ctgagcacta gcaacaaggt       300

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ccataattct cttcctatac ataaatgtct tgttttcaaa agtggatgga acttggctgg    780

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aagtggatgg gacttgtacc agagatttta tctacttctc caactgcttc agaatacca    960

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taacattctt aaatgataaa ggcccaactt ttggcattct tcccaatttc gggaacctga    1080

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<213>   Homo sapiens

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taggacgcag ccgcctcatg ggggtccagg ggctctggaa gctgctggag tgctccgggc    240

ggcaggtcag ccccgaagcg ctggaaggga agatcctggc tgttgatatt agcatttggt    300

taaaccaagc acttaaagga gtccgggatc gccatgggaa ctcaatagaa aatcctcatc    360

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tgtttgatgg ggatgctcca ctattgaaga aacagacttt ggtgaagaga aggcagagaa    480

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aaagacaagc catcaaaact gccttcagaa gcaaaagaga tgaagcacta cccagtctta    600

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ttcaagctaa gacagttgca gaagtggatt cagagtctct tccttcttcc agcaaaatgc   1140

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cctacctcaa acccgtggtg gatgactcga agggatcctt tctgtggggg aaacctgatc    3060

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aatctctgtt tcctgtatta aagcaactcg atgcccagca gacacacgtc cgaattgatt    3180

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<212>  DNA
<213>  Homo sapiens

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attcctactt catggatgtg aaatgcccag gatgctataa aatcaccacg gtctttagcc    180

atgcacaaac ggtagttttg tgtgttggct gctccactgt cctctgccag cctacaggag    240

gaaaagcaag gcttcagaca ggatgttcct tcaggaggaa gcagcactaa aagcactctg    300

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<212>  DNA
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acaaggtcca ttatgaatgt actggatgca aaacgaggat tggctgctac accaaatcgt      1980

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gcaggaagga gaggaaaaga aaaaaagaca aagaggagat gagagaaaaa aatccagttc      180

agcacaacaa aagtgcaaaa gctcacctac ccaaatggca ttaaagcctc gttgtgtaat      240

cgtgtcagaa aacaaagcat actgacacat agggctttac ttcccatcca cttgagtttt      300

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<213> Homo sapiens

<400> 553

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317

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aaaaatgcat cagtaaggtc tgtatttaaa tgtggatgta gacatcataa ttaccaagac      660

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aggttgagca aggtggctca tgcctgtaat cccagtactt tggcaggctg aggtgggcag      240

atcacttgag cccaggagtt tgagaccaga ctgggcaaca tggcaaaacc ctgtctctac      300

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ctgggcaata acgggtacc ttgcaaggat tgggcagaaa gccttagagg tatggtgctt      360
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ttgtcttgga agtaattgtt gaagttgtgc agttgatcag tgcacagtta ggtgcaatgt      2040

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<213>    Homo sapiens

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tctacagaag aaacgaggaa aatgattaat gcttgggttg aaaataaaac taatgaaaa       480

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accatatatt tcaaaggaca aaggcaaat aaatttcaag taagagagac agttaaaagt      600

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aacaaattaa gcatgattat tctgcttcca gtaggcatag ctaatctgaa acagatagaa      780

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attctgatta taagtagtgg ctcttgacta caatcaagtc tcaaataata gtgtaagaga     180

ataaagcaga ataataagac taagttaaca gtttaggctt ctttggaatc atgcgggcct     240

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aacctaaaat ctgggctcct aaataccaag cttcactggc tctctggtcc cagtgagagt     720

tggtgctaaa aagtattccg gaatgaaaag ttctcttcca gagaccctgg ccttccaaag    780

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aaaaaaaaa                                                             3129
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gcactgcaaa cgcggcaatg gtctcatcaa ggtgaacggg cggcccctgg agatgattga     180

gccgcgcacg ctacagtaca agctgctgga gccagttctg cttctcggca aggagcgatt     240

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tatccgtcag tccatctcca aagccctggt ggcctattac cagaaatatg tggatgaggc     360

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ccctcgtcgc tgcgagtcca aaaagtttgg aggccctggt gcccgcgctc gctaccagaa     480

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ccgcgtggaa tgtgagtgtg tttgtgtgca tgaaagagaa agactgatta cctcctgtgt    1380

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cttttttaat aaagaagggg gacgggggtct tggattagta taaatataac aataatggaa     300

aagttgaata tgttaaggaa taagaattaa tctcatttaa agcctcaaaa caaccatgaa     360

aaggattaga aacattttan nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn     420

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<213>  Homo sapiens

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```

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caagaaataa tgagtgacca gcggtttaga cgggttgcaa aggacccgag attttgggaa      180

atgccagaaa aggatcgaaa agtcaaaatt gacaagagat ttcgagccat gtttcatgac      240

aagaagttca agttgaacta tgccgtggat aaaagagggc gccccattag ccatagcact      300

acagaggatt tgaagcgttt ttacgacctt tcagattctg attccaatct ctctggtgaa      360

gatagcaaag cattgagtca aaagaaaata aagaagaaaa aaacccagac taaaaaagaa      420

atcgattcaa aaaatctagt tgagaaaaag aaagaaacca agaaggctaa tcacaagggt      480

tctgaaaata aaactgattt agataattct ataggaatta aaaaaatgaa aacctcatgt      540

aaatttaaga tagattcaaa cataagtccg aagaaggata gcaagaaatt tacacaaaaa      600

aataagaaag agaaaaaaaa cattgttcaa catactacag actcttctct cgaagaaaaa      660

caaaggacat tagactcagg cacctctgaa attgtgaaat ctcccagaat cgagtgttct      720

aagacaagaa gagaaatgca atcagtggtt caactcataa tgcaagagaa cagtgatggt      780

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agcgttagtg aaataggaag tgatgaggaa tctgaaaatg aaattacaag tgttggtaga      900

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gatgaagatg aggatagtga ggatgatgat aaaagtgaca gtgccctga tcttgcaagg     1020

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ctcttgcagg ttattcaaga aaaagaaaag aaaggcaaag aaaatgatat ggaaatggaa     1920
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attaaatggg ttccaggtct taaagaaagt gcagaagaga tggtcaaaaa caaattggaa    1980

ggaaaggata aactgacccc ttgggaacaa tttttagaga agaagaaaga gaaaaaaaga    2040

ctgaaaagga aacagaaggc tcttgctgaa gaggccagtg aagaggaact tccctctgat    2100

gttgatttga atgacccata ctttgctgaa gaagttaaac aaataggtat aaataaaaaa    2160

tcggtaaaat ctgcaaaaga tggcacatct ccagaagaag aaattgaaat agaaagacaa    2220

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gctatggaaa aaatccttga ggagaaggcc cggcaaagag aacggaaaga acaagaactt `  2520

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<213>   Homo sapiens

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gcaaactcct tgccgcccgc cccgggctgg gcgcaaaata ccaggctacc atggtctaca    180

agactctctt cgctctttgc atcttaactg caggatggag ggtacagagt ctgcctacat    240

cagctccttt gtctgtgtttct cttccgacaa acattgtacc accgactacc atctggacta    300
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gctctccaca aaacactgat gcagacactg cctccccatc caacggcact cacaacaact      360

cggtgctccc agttacagca tcagccccaa catctctgct tcctaagaac atttccatag      420

agtccagaga agaggagatc accagcccag gttcgaattg ggaaggcaca aacacagacc      480

cctcaccttc tgggttctcg tcaacaacgc gtggagtcca cttaacaacc acgttggagg      540

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tggaggagcc cagagaccgt ttgctttata cccacacagc aactggtcca ctgctttact     2100

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cagttctgga aaatagcaca agttatgaag aagccaagaa tttattgacc aagaccaaga     840

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ctaacttaaa aaactgcatc ccacgttctg ttaatttagt aaataaacaa gtcaaagact      1980

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tttgtccact tcattttgta taatcacagt tgtgttcctg cacactcaata aacagtcact      2280

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tccgagatgt ggcaccatag tgccggtgcc tgtggcttca ccgcccact tccacctccg      420

cccagcctgt aatgtttata taagcagcct caaggaccaa gaaccatctg cgaaaggaca      480
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366

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cgtgtgggag tatacatcgg tgcaggcttc ctggatgaca gttgggtgat atgtgtcatg    720

tggcctaaaa gcctccatgt catttgacct acgaattcta tctttgggaa tttatcctaa    780

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cattaaaagt catgtaaaag aacatctgac tgaaagaaaa atgctccttg aatattaaaa    1020

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gcttgtatac gtagagcaga taaaaaagac ggaaggcata ctaaaaaatg ttgagtggtt    1140

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<213>  Homo sapiens

<400>  614
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caccatactc agagtgatgg aattaatagc atttagggta agcaaggacc agtgtgagac    180

tgggcccagg aaatggggag ggaatgtgag gagaaacagg gaatgacatt aaagaagaaa    240

cagacacctt ggagaattta tgactccttt ctctatgtca tgtccagaag aggcaagtct    300

acagagatca aagtagccta ggggtgccta gggatgggga ggttggggtg gcgactaagg    360

ggggctggat ttcttttggg ggtagtcaac tctaagacgg actgtgctga tggctgctga    420

actgtgacta tactaaaccg gcatcaa                                        447
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<210>  615
<211>  2372
<212>  DNA
<213>  Homo sapiens

<400>  615
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gcaagaagcc gagcccgagg ggcggccgcg acccctctga ccgagatcct gctgctttcg    120

cagccaggag caccgtccct ccccggatta gtgcgtacga gcgcccagtg ccctggcccg    180

gagagtggaa tgatccccga ggcccagggc gtcgtgcttc cgcagtagtc agtccccgtg    240

aaggaaactg gggagtcttg agggaccccc gactccaagc gcgaaaaccc cggatggtga    300

ggagcaggca aatgtgcaat accaacatgt ctgtacctac tgatggtgct gtaaccacct    360

cacagattcc agcttcggaa caagagaccc tggttagacc aaagccattg cttttgaagt    420

tattaaagtc tgttggtgca caaaaagaca cttatactat gaaagaggtt cttttttatc    480

ttggccagta tattatgact aaacgattat atgatgagaa gcaacaacat attgtatatt    540

gttcaaatga tcttctagga gatttgtttg gcgtgccaag cttctctgtg aaagagcaca    600

ggaaaatata taccatgatc tacaggaact tggtagtagt caatcagcag gaatcatcgg    660

actcaggtac atctgtgagt gagaacaggt gtcaccttga aggtggggagt gatcaaaagg    720

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ctacctcatc tagaaggaga gcaattagtg agacagaaga aaattcagat gaattatctg    840

gtgaacgaca aagaaaacgc cacaaatctg atagtatttc cctttccttt gatgaaagcc    900

tggctctgtg tgtaataagg gagatatgtt gtgaaagaag cagtagcagt gaatctacag    960

ggacgccatc gaatccggat cttgatgctg gtgtaagtga acattcaggt gattggttgg   1020

atcaggattc agtttcagat cagtttagtg tagaatttga agttgaatct ctcgactcag   1080

aagattatag ccttagtgaa gaaggacaag aactctcaga tgaagatgat gaggtatatc   1140

aagttactgt gtatcaggca ggggagagtg atacagattc atttgaagaa gatcctgaaa   1200

tttccttagc tgactattgg aaatgcactt catgcaatga aatgaatccc cccttccat   1260

cacattgcaa cagatgttgg gcccttcgtg agaattggct tcctgaagat aaagggaaag   1320

ataaaggggga aatctctgag aaagccaaac tggaaaactc aacacaagct gaagagggct   1380

ttgatgttcc tgattgtaaa aaaactatag tgaatgattc cagagagtca tgtgttgagg   1440

aaaatgatga taaaattaca caagcttcac aatcacaaga aagtgaagac tattctcagc   1500

catcaacttc tagtagcatt atttatagca gccaagaaga tgtgaaagag tttgaaaaggg   1560

aagaaaccca agacaaagaa gagagtgtgg aatctagttt gccccttaat gccattgaac   1620

cttgtgtgat ttgtcaaggt cgacctaaaa atggttgcat tgtccatggc aaaaacaggac   1680

atcttatggc ctgctttaca tgtgcaaaga agctaaagaa aaggaataag ccctgcccag   1740

tatgtagaca accaattcaa atgattgtgc taacttattt ccccctagttg acctgtctat   1800

aagagaatta tatatttcta actatataac cctaggaatt tagacaacct gaaatttatt   1860

cacatatatc aaagtgagaa aatgcctcaa ttcacataga tttcttctct ttagtataat   1920
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tgacctactt tggtagtgga atagtgaata cttactataa tttgacttga atatgtagct    1980

catcctttac accaactcct aattttaaat aatttctact ctgtcttaaa tgagaagtac    2040

ttggtttttt ttttcttaaa tatgtatatg acatttaaat gtaacttatt attttttttg    2100

agaccgagtc ttgctctgtt acccaggctg gagtgcagtg ggtgatcttg gctcactgca    2160

agctctgccc tccccgggct cgcaccattc tcctgcctca gcctcccaat tagcttggcc    2220

tacagtcatc tgccaccaca cctggctaat ttttgtact tttagtagag acagggtttc    2280

accgtgttag ccaggatggt ctcgatctcc tgacctcgtg atccgcccac ctcggcctcc    2340

caaagtgctg ggattacagg catgagccac cg                                  2372
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<210>   616
<211>   3198
<212>   DNA
<213>   Homo sapiens

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gtgccgctat gggagtcccg gcgttcttcc gctggctcag ccgcaagtac ccgtccatca     120

tagtcaactg cgtggaagag aagccaaaag aatgcaatgg tgtaaagatt ccagttgatg     180

ccagtaaacc taatccaaat gatgtggagt ttgataatct gtatttggat atgaatggaa     240

tcatccatcc ctgtactcat cctgaagaca aaccagcacc aaaaaatgaa gatgaaatga     300

tggttgcaat ttttgagtac attgacagac ttttcagtat tgtaagacca agaagacttc     360

tctacatggc aatagatgga gtggcaccac gtgtaaaaat gaaccagcag cgttcaagga     420

ggttcagggc catcaaaaga ggaatggaag cagcagtcga gaagcagcga gtcagggaag     480

aaatattggc aaaaggtggc tttcttcctc cagaagaaat aaaagaaaga tttgacagca     540

actgtattac accaggaact gaattcatgg acaatcttgc taaatgcctt cgctattaca     600

tagctgatcg tttaaataat gaccctgggt ggaaaaattt gacagttatt ttatctgatg     660

ctagtgctcc tggtgaagga gaacataaaa tcatggatta cattagaagg caaagagccc     720

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tgcttggcct tgccacacat gaaccgaact ttaccattat tagagaagaa ttcaaaccaa     840

acaggcccaa accatgtggt ctttgtaatc agtttggaca tgaggtcaaa gattgtgaag     900

gtttgtcaag agaaaagaag ggaaagcatg atgaacttgc cgatagtctt ccttgtgcag     960

aaggagagtt tatcttcctt cggcttaatg ttcttcgtga gtatttggaa agagaactca    1020

caatggccag cctaccattc acatttgatg ttgagaggag cattgatgac tgggtttca    1080

tgtgcttctt tgtgtgggaaat gacttcctcc ctcatttgcc atcgttagag attagggaaa    1140
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atgcaattga ccgtttggtt aacatataca aaaatgtggt acacaaaact gggggttacc    1200

ttacagaaag tggttatgtc aatctgcaaa gagtacagat gatcatgtta gcagttggtg    1260

aagttgagga tagcattttt aaaaagagaa aggatgatga ggacagtttt agaagacgac    1320

agaaagaaaa aagaaagaga atgaagagag atcaaccagc tttcactcct agtggaatat    1380

taactcctca tgccttgggt tcaagaaatt caccaggttc tcaagtagcc agtaatccga    1440

gacaagcagc ctatgacatg aggatgcaga ataactctag tccttcgata tctcctaata    1500

cgagtttcac atctgatggc tccccgtctc cattaggagg aattaagcga aaagcagaag    1560

acagtgacag tgaacctgag ccagaggata atgtcaggtt atgggaagct ggctggaagc    1620

agcggtacta caagaacaaa tttgatgtgg atgcagctga tgagaaattc cgtcggaaag    1680

ttgtgcagtc gtacgttgaa ggactttgct gggttcttag atattattac cagggctgtg    1740

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atgggaagaa atatgcatgg caaggtgttg ctctcttgcc attcgtggat gagcgaaggc    2040

tacgagctgc cctagagag gtatacccag acctcactcc agaagagacc agaagaaaca    2100

gccttggagg tgatgtctta tttgtgggga aacatcaccc actccatgac ttcattttag    2160

agctgtacca gacaggttcc acagagccag tggaggtacc ccctgaacta tgtcatggga    2220

ttcaaggaaa gtttttcttg gatgaagaag ccattcttcc agatcaaata gtatgtgctc    2280

ctgttcctat gttaagggat ctgacacaga acactgtagt cagtattaat tttaaagacc    2340

cacagtttgc tgaagattac atttttaaag ctgtaatgct tccaggagca agaaagccag    2400

cagcagtact gaaacctagt gactgggga aatccagcaa tggacggcag tggaagcctc    2460

agcttggctt taaccgtgac cggaggcctg tgcacctgga tcaggcagcc ttcaggactt    2520

tgggccatgt gatgccaaga ggctcaggaa ctggcatta cagcaatgct gcaccaccac    2580

ctgtgactta ccaggggaaac ttatacaggc cgcttttgag aggacaagcc cagattccaa    2640

aacttatgtc aaatatgagg ccccaggatt cctggcgagg tcctcctccc ctttttccagc    2700

agcaaaggtt tgacagaggc gttgggggctg aacctctgct cccatggaac cggatgctgc    2760

aaacccagaa tgcagccttc cagccaaacc agtaccagat gctagctggg cctggtgggt    2820

atccacccag acgagatgat cgtggaggga gacaggggata tcccagagaa ggaaggaaat    2880

acccttttgcc accaccctca ggaagataca attggaatta agcttttgta aagctttccc    2940
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aaatcctttc atcattctac agttttatgc tatttgtgga aagatttctt tctcaagtag    3000

tagttttttaa taaaactaca gtactttgtg tatttctttt aactgtgtat atttctactg    3060

atctgatctc actgtttatg ttgctttcca aagatgtatg ttgcataata cagtggatct    3120

gaatttatta atgcttataa acacatttga ggaataggag gtccgggttt tccataatgg    3180

gtaaaatgga accagctg                                                  3198


<210>  617
<211>  422
<212>  DNA
<213>  Homo sapiens

<400>  617
tgagtgtaaa gaaaggttta ctccttgtat catcccctcc ccgtggactg cttcaattct     60

atcggggaca ggccagtccc tggaggctgc aaggagccac aaacctttcc cagctcacac    120

tctgcacccc tcagtctctg ctgctaaaga atcagactca ggtagatggg gtgtccacag    180

tctgtcctca ttacccagtc ataccgggta gcatggcccg agagagccct tatctctccc    240

caccttaaaa ccctcagcat cacacagcag gaaccagtcc acagggctta ccaaggatac    300

gcagtgaaaa cagaataatg tctgttacaa acccctaaa cctgagatgg ctgaagagcc    360

agattcctgc accccatctg actccccag gcagtgggag atgacccaaa gcccccattc    420

cc                                                                   422


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<211>  287
<212>  DNA
<213>  Homo sapiens

<400>  618
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aatacaatgc aacaaaatat tcatatattg cacaaacagg gatgtgcata caaagatgct    120

aacaacattg gctggtaata ggctttacca tgttatgatc taaatgcttg ttcatcaaaa    180

aatgtacaaa attctaagtt tggcatccaa aagggggctt acagttattg aatatttttc    240

ccagccctat tttaaatcaa attcaagttt gcctatgaca aagactg                  287


<210>  619
<211>  515
<212>  DNA
<213>  Homo sapiens

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gaatttatta gatacaccct gattctccac tgccctaaca cacgatactg agttgctaat    120
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gtccacattc agcaccaggg gaaattcgtg catcacatga catcgcctca ttaaagctgt        180

cagcataact ttaccaaaca agttatataa caaccaagaa gccactggta caggataata        240

ttcagaatgt gacatgtaaa aattgcaata agtagaatat attttttatg ttgttgaaca        300

aaagaaaatt gaaagaatta aagcaatcca agggcctaga agcaagtgaa ttctctgata        360

cctgtgagta aggctacttt aggacagccc atgaatccat tcctcgggtt gttctgagct        420

ccttgagaaa tggccccaac tgggttttg gagtgaacct ggttcaatac agattgcctt         480

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<211>  1843
<212>  DNA
<213>  Homo sapiens

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cgctccgcac cgctcttcct ccagccgctg agccgtccct tctcgccatg tcccagagca        120

ggcaccgcgc cgaggccccg ccgctggagc gcgaggacag tgggaccttc agtttgggga        180

agatgataac agctaagcca gggaaaaacac cgattcaggt attacacgaa tacggcatga       240

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ctttcacctt cagagtaacc gttggtgaca taacctgcac aggtgaaggt acaagtaaga        360

agctggcgaa acatagagct gcagaggctg ccataaacat tttgaaagcc aatgcaagta        420

tttgctttgc agttcctgac cccttaatgc ctgaccttc caagcaacca aagaaccagc         480

ttaatcctat tggttcatta caggaattgg ctattcatca tggctggaga cttcctgaat        540

atacccttc ccaggaggga ggacctgctc ataagagaga atatactaca atttgcaggc         600

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ctgagaaatt tcttgccaaa tttagtaata tttctccaga gaaccacatt tctttaacaa        720

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ttagtgaaat tgccaaggaa caaggttta atataacata tttggatata gatgaactga        900

gcgccaatgg acaatatcaa tgtcttgctg aactgtccac cagccccatc acagtctgtc        960

atggctccgg tatctcctgt ggcaatgcac aaagtgatgc agctcacaat gctttgcagt       1020

atttaaagat aatagcagaa agaaagtaaa tctggagcaa cttaaaaaat ctttcagtag       1080

cacataaaaa gttcccctct ggcccttcc caagtaaaac ttttaccgta gtgtttatgt       1140

cttgtttcta aatctcttca tagattccat caacactcca gatttaatta tctcctcata      1200
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gttgttatta agctcttttt aatggcttca actttgtatc agtatactgt atttataaac   1260

tttgtaccac aagagagagt gtagcaccca ttttacagtg ccatgcacat cagagaaaga   1320

aactgcatgt ttgttgttga tgatgaaata aaaatgctag cgacagtctt tcttactggt   1380

gcttaagctc ttctttgcac aaagctttat aaagggaatt caaaggaagc cctttagaat   1440

tagagtcttg agggacagca ctaacaggcc tttattaagt atgattgatt gttaaatttc   1500

agggaacatg attggtctgc tgtgtatttg aattcatgta acaaagaact gttacgatgg   1560

gattctgctc attttattaa aaagctactg acttgactgt catcctgttc ttgttagcca   1620

ttgtgaataa gattttaatg ttgataattc tgttatttac atatctctaa tttactttga   1680

aattcaaagg tgaaaataaa aaatgatggc ctaagtaaaa tttaaaaaaa aaaaaaaaaa   1740

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa   1800

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaccccc ggg                    1843


<210>  621
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<212>  DNA
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ttgcctgctg gtttctgagc tttccatagt cacagtctgg tttttaggcag aaactgtacc   180

tccatttgca atcaacccctt ttgcagctgt gccttacgct tcttactgtg ttttttaccaa   240

ttcatctgga acaaactaga aaaggaa                                        267


<210>  622
<211>  363
<212>  DNA
<213>  Homo sapiens


<220>
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<222>  (316)..(316)
<223>  n is a, c, g, t or u

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gccctttactt cttgcgacgc gagacgatga acgtctgcgt gcgcttgttg ttgcgagtgc   120

ggtagccctt cgtcagggtg ttccacggcg cacacagggac ctggccctcg ccggtgcggc   180

cttcgccacc accgtgcggg tgatccaccg ggttcatggc aacgccacga acgtgtcgggc   240

ggatgcccct ccagcggatc gcgccggcct tgccgtactg gcgcaggctg tgctcttcgt   300
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tgctcacttc accganggtg gcgcggcagt cgatgtgcac gcggcggact tcgccggagc    360

gca                                                                  363
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<212>  DNA
<213>  Homo sapiens

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taagcacatc ccctcgaaat agcagcagct ctaaacatga aattcttcct ggaggatttt    120

cttactcttg agttctattc taccaaattt tttgagcact tactgtcagg cattcagaat    180

gtgagcaatg acaataattt acctacactt ttgcacttac agtatgctgg gcccagttga    240

ttctcaaaac agttctggga attagctata aaaatgcccc catcttacag atgaggaagc    300

tcaggctcag aaaggcaaaa aaaaaaaagc cctatagtga gtcgt                    345
```

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<211>  417
<212>  DNA
<213>  Homo sapiens

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ggaaaagwta cagaaaaama cctatcacam aggaaaagat aaatatgtyt gaytatytha    120

mmaggtgaaa cccataacca aaatttaaag gcaaattcac acaagtggaa atacagatgc    180

ccaactatcg tacaaagrga accatgwtca aggtcactaa caagcaaaga attttmagtt    240

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gtscagtggc gcgatcttgg ytcactgcaa cctccgcctc ctgggttcaa gcaattctct    360

gcctcagcct cccaagtagc tgggdttaca ggcgcccgcc accacgcccg gctaatt       417
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<210>  625
<211>  2422
<212>  DNA
<213>  Homo sapiens

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aaggtttgga gagcggctgg gttcgcggga cccgcgggct tgcaccgcc cagactcgga    180

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agtccatttg atcagcggag actcggcggc cgggccgggg cttcccgca gccctgcgc     300
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gctcctagag ctcgggccgt ggctcgtcgg ggtctgtgtc ttttggctcc gagggcagtc      360

gctgggcttc cgagaggggt tcgggccgcg taggggcgct ttgttttgtt cggttttgtt      420

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gtgtctaacg ggagccctag cctggagcgg atggacgcca ggcaggcgga gcaccccaag      540

ccctcggcct gcaggaacct cttcggcccg gtggaccacg aagagttaac ccgggacttg      600

gagaagcact gcagagacat ggaagaggcg agccagcgca agtggaattt cgattttcag      660

aatcacaaac ccctagaggg caagtacag tggcaagagg tggagaaggg cagcttgccc      720

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agagccaaca gaacagaaga aaatgtttca gacggttccc caaatgccgg ttctgtggag     1020

cagacgccca agaagcctgg cctcagaaga cgtcaaacgt aaacagctcg aattaagaat     1080

atgtttcctt gtttatcaga tacatcactg cttgatgaag caaggaagat atacatgaaa     1140

attttaaaaa tacatatcgc tgacttcatg gaatggacat cctgtataag cactgaaaaa     1200

caacaacaca ataacactaa aattttaggc actcttaaat gatctgcctc taaaagcgtt     1260

ggatgtagca ttatgcaatt aggttttcc ttatttgctt cattgtacta cctgtgtata     1320

tagtttttac cttttatgta gcacataaac tttggggaag ggagggcagg gtggggctga     1380

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tttgacttgc atgaagagaa gcaatttgg ggaagggttt gaattgtttt ctttaaagat     1500

gtaatgtccc tttcagagac agctgatact tcatttaaaa aaatcacaaa aatttgaaca     1560

ctggctaaag ataattgcta tttattttta caagaagttt attctcattt gggagatctg     1620

gtgatctccc aagctatcta aagtttgtta gatagctgca tgtggctttt ttaaaaaagc     1680

aacagaaacc tatcctcact gccctcccca gtctctctta aagttggaat ttaccagtta     1740

attactcagc agaatggtga tcactccagg tagtttgggg caaaaatccg aggtgcttgg     1800

gagtttgaa tgttaagaat tgaccatctg cttttattaa atttgttgac aaaatttct     1860

catttcttt tcacttcggg ctgtgtaaac acagtcaaaa taattctaaa tccctcgata     1920

tttttaaaga tctgtaagta acttcacatt aaaaaatgaa atatttttta atttaaagct     1980

tactctgtcc atttatccac aggaaagtgt tatttttaaa ggaaggttca tgtagagaaa     2040

agcacacttg taggataagt gaaatggata ctacatcttt aaacagtatt tcattgcctg     2100
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cagctggctg acctgcagca gctccctgac atcctgaaga tcacggaggc gaagctggct    2040

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cacaaaaaag gacccgccaa aaccaaatta tagcggcaaa tttttttttgg ccataaatag  240

ggatcccctt aaaaatcctt ggaaactcct tggcagtttt aaggcccaaa ctaacccttg   300

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gagtcctggc ttggcactcc cttgctggtg atcttgggca aaccatgctg ggcctcgatt     240

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gaagaagtgc atgagaaagt gctttataag ctgtatagct ctcttgccta tgagagtatc     360

attgtagttc atctcacata accnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn     420

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gcagcagtcc tgggcccca agtatcatca gtgactgtgg ctccttcttt ctttctgatc     300
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tgagccttat cagtcaaaga ggaatgttaa tatgtaatag gaaatgaaga attggtgaaa      180

atactttgtg aaagaaacat aactttaaga tagtactata tctgaatccc ttgctgttcc      240

ctatatggtg ccttacacat cataagccag caaatacctt ggtctgattg aatggtaatg      300

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cagggggcac ccccacagtc acggtacccc acactgctac tcggctgagg aactgcccct      180

cggccaggcc cccccacacc tgctggctcg aggtgccaag tgggggcagg ctttgcctgt      240

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aaattcctct ggtgtcacag ttcctcctat accaggccag gcacttgcca atgacactgg      240

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ggaatgagca ggacttaatt ctcatgccgg catgggctg ccgggcaccc agctcctttc      540

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<400> 661
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ataaagttca gaaaacatgt ctcgaagata tgactccagg accactatat tttctccaga       180

aggtcgctta taccaagttg aatatgccat ggaagctatt ggacatgcag gcacctgttt       240
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415

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gggaatttta gcaaatgatg gtgtttgct tgcagcagag agacgcaaca tccacaagct    300

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tgtggcaggc ataacttctg atgctaatgt tctgactaat gaactaaggc tcattgctca    420

aaggtattta ttacagtatc aggagccaat accttgtgag cagttggtta cagcgctgtg    480

tgatatcaaa caagcttata cacaatttgg aggaaaacct ccctttggtg tttcattgct    540

gtacattggc tgggataagc actatggctt tcagctctat cagagtgacc ctagtggaaa    600

ttacgggggа tggaaggcca catgccattg aaataatagc gctgcagctg tgtcaatgtt    660

gaaacaagac tataaagaag gagaaaatgac cttgaagtca gcacttgctt tagctatcaa    720

agtactaaat aagaccatgg atgttagtaa actctctgct gaaaaagtgg aaattgcaac    780

actaacaaga gagaatggaa agacagtaat cagagttctc aaacaaaaag aagtggagca    840

gttgatcaaa aaacatgagg aagaagaagc caaagctgag cgtgagaaga aagaaaaaga    900

acagaaagaa aaggataaat agaatcagag attttattac tcatttgggg caccatttca    960

gtgtaaaagc agtcctactc ttccacacta ggaaggcttt actttttta actggtgcag    1020

tgggaaaata ggacattaca tactgaattg ggtccttgtc atttctgtcc aattgaatac    1080

tttattgtaa cgatgatggt tacccttcat ggacgtctta atcttccaca cacatccct    1140

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gttggccgag tcgtcccgcg cgcaccgcct ccgcgcgcct atgagaatga ggtggtaacg    420

ggcccccgga tgaccccgcg tcaccactgt gaggcctaca gctctgccgg ggaggaggag    480

gaggaggaag aggaggagaa ggtagctaca gcaagctggg tagcaggcag atccaaagga    540

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aatcactagg gaagcacaga tgtggaaagt gaatgtgcgg aaaatgcctt caaatcagaa    660
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caagactgtt gaggaagatg agagaattcc agtactaaag gtattggcaa gagacagttt    900

ctgtgtgatgt tcctcatctg aaattttgag aatggagaga attattctgg ataagttgaa    960

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tcaacaagtg ctacctttga gtgtaaacta aggtagacta ctttgggaat gagaacatgc   1740

aaaatcagga aaggctgtag aaggaaatat accttaacag gctgatttgg agtgagccag   1800

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tccctgcgcc agggcagggt ttactcatcc cggcgaggtg atcccatgcg cgagggcggg    240

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ttcagcacaa gagttttcaa aaagcaaatg agacaagtca agaatccttt tggcttagag     240

atcactaatc catcttcagc ttcaattaca actggcataa ccttgacaac agattgcctt     300

gaagatagcc tccttacatg ctactggggg tgcagtgttc aaaaattata tgaagctctg     360

cagaagcatg tttattgctt cagaataagc actccccaag cattagaaga tgctctgtat     420

agtgaatatc tctatcagga acagtatttt attaaaaagg atagcaaaga agaaatatat     480

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ccattggtag cgctattgac cttagctgat gaggatgacc gggaaattta tgatattatt     600

tccatggtgt cagtgattca tattcctgat aggacttata aactatcctg cagaatattg     660

tatcaatatt tactcttggc tcaaggtcaa tttcatgatc ttaagcaact tttcatgtct     720

gcaaataata atttcactcc ctccaacaat tcctcttcag aagaaaaaaa cacagacaga     780

agtttgttgg aaaaggtggg actctctgaa agtgaagttg agccatcgga agagaacagc     840

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acatgcctgt gtgatggctg tgtgaagtat tttcagcagt gcccaatgtg caggcagttt     960

gttcaggaat cttttgcact ttgcagtcaa aaagagcaag ataaagacaa accgaagact    1020

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tcttggaatt catcataaca tggaatctac agtactgacc atcaatgaaa attatatttt    1140

aacttcatat ttgtatggta cttggatgat aaaaattaat tattcctttc tgcttagtga    1200

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Ser Ile Val Gly Arg Pro Arg His Gln Gly Val Met Val Gly Met Gly
          35                  40                  45


Gln Lys Asp Ser Tyr Val Gly Asp Glu Ala Gln Ser Lys Arg Gly Ile
     50                  55                  60


Leu Thr Leu Lys Tyr Pro Ile Glu His Gly Ile Val Thr Asn Trp Asp
65                  70                  75                  80


Asp Met Glu Lys Ile Trp His His Thr Phe Tyr Asn Glu Leu Arg Val
               85                  90                  95


Ala Pro Glu Glu His Pro Val Leu Leu Thr Glu Ala Pro Leu Asn Pro
          100                 105                 110


Lys Ala Asn Arg Glu Lys Met Thr Gln Ile Met Phe Glu Thr Phe Asn
          115                 120                 125


Thr Pro Ala Met Tyr Val Ala Ile Gln Ala Val Leu Ser Leu Tyr Ala
     130                 135                 140


Ser Gly Arg Thr Thr Gly Ile Val Met Asp Ser Gly Asp Gly Val Thr
145                 150                 155                 160


His Thr Val Pro Ile Tyr Glu Gly Tyr Ala Leu Pro His Ala Ile Leu
               165                 170                 175


Arg Leu Asp Leu Ala Gly Arg Asp Leu Thr Asp Tyr Leu Met Lys Ile
          180                 185                 190


Leu Thr Glu Arg Gly Tyr Ser Phe Thr Thr Thr Ala Glu Arg Glu Ile
          195                 200                 205


Val Arg Asp Ile Lys Glu Lys Leu Cys Tyr Val Ala Leu Asp Phe Glu
     210                 215                 220


Gln Glu Met Ala Thr Ala Ala Ser Ser Ser Leu Glu Lys Ser Tyr
225                 230                 235                 240


Glu Leu Pro Asp Gly Gln Val Ile Thr Ile Gly Asn Glu Arg Phe Arg
               245                 250                 255
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Cys Pro Glu Ala Leu Phe Gln Pro Ser Phe Leu Gly Met Glu Ser Cys
            260   265   270

Gly Ile His Glu Thr Thr Phe Asn Ser Ile Met Lys Cys Asp Val Asp
            275   280   285

Ile Arg Lys Asp Leu Tyr Ala Asn Thr Val Leu Ser Gly Gly Thr Thr
        290   295   300

Met Tyr Pro Gly Ile Ala Asp Arg Met Gln Lys Glu Ile Thr Ala Leu
305   310   315   320

Ala Pro Ser Thr Met Lys Ile Lys Ile Ile Ala Pro Pro Glu Arg Lys
                325   330   335

Tyr Ser Val Trp Ile Gly Gly Ser Ile Leu Ala Ser Leu Ser Thr Phe
            340   345   350

Gln Gln Met Trp Ile Ser Lys Gln Glu Tyr Asp Glu Ser Gly Pro Ser
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Ile Val His Arg Lys Cys Phe
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Ser Pro Ser Arg Glu Cys Lys Glu Leu Asp Gly Leu Trp Ser Phe Arg
        35   40   45

Ala Asp Phe Ser Asp Asn Arg Arg Gly Phe Glu Glu Gln Trp Tyr
    50   55   60

Arg Arg Pro Leu Trp Glu Ser Gly Pro Thr Val Asp Met Pro Val Pro
65   70   75   80

Ser Ser Phe Asn Asp Ile Ser Gln Asp Trp Arg Leu Arg His Phe Val
                85   90   95

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Gly Trp Val Trp Tyr Glu Arg Glu Val Ile Leu Pro Glu Arg Trp Thr
                100   105   110

Gln Asp Leu Arg Thr Arg Val Val Leu Arg Ile Gly Ser Ala His Ser
        115   120   125

Tyr Ala Ile Val Trp Val Asn Gly Val Asp Thr Leu Glu His Glu Gly
    130   135   140

Gly Tyr Leu Pro Phe Glu Ala Asp Ile Ser Asn Leu Val Gln Val Gly
145   150   155   160

Pro Leu Pro Ser Arg Leu Arg Ile Thr Ile Ala Ile Asn Asn Thr Leu
            165   170   175

Thr Pro Thr Thr Leu Pro Pro Gly Thr Ile Gln Tyr Leu Thr Asp Thr
        180   185   190

Ser Lys Tyr Pro Lys Gly Tyr Phe Val Gln Asn Thr Tyr Phe Asp Phe
        195   200   205

Phe Asn Tyr Ala Gly Leu Gln Arg Ser Val Leu Leu Tyr Thr Thr Pro
    210   215   220

Thr Thr Tyr Ile Asp Asp Ile Thr Val Thr Thr Ser Val Glu Gln Asp
225   230   235   240

Ser Gly Leu Val Asn Tyr Gln Ile Ser Val Lys Gly Ser Asn Leu Phe
            245   250   255

Lys Leu Glu Val Arg Leu Leu Asp Ala Glu Asn Lys Val Val Ala Asn
        260   265   270

Gly Thr Gly Thr Gln Gly Gln Leu Lys Val Pro Gly Val Ser Leu Trp
        275   280   285

Trp Pro Tyr Leu Met His Glu Arg Pro Ala Tyr Leu Tyr Ser Leu Glu
    290   295   300

Val Gln Leu Thr Ala Gln Thr Ser Leu Gly Pro Val Ser Asp Phe Tyr
305   310   315   320

Thr Leu Pro Val Gly Ile Arg Thr Val Ala Val Thr Lys Ser Gln Phe
            325   330   335

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Leu Ile Asn Gly Lys Pro Phe Tyr Phe His Gly Val Asn Lys His Glu
            340                 345                 350

Asp Ala Asp Ile Arg Gly Lys Gly Phe Asp Trp Pro Leu Leu Val Lys
            355                 360                 365

Asp Phe Asn Leu Leu Arg Trp Leu Gly Ala Asn Ala Phe Arg Thr Ser
    370                 375                 380

His Tyr Pro Tyr Ala Glu Glu Val Met Gln Met Cys Asp Arg Tyr Gly
385                 390                 395                 400

Ile Val Val Ile Asp Glu Cys Pro Gly Val Gly Leu Ala Leu Pro Gln
            405                 410                 415

Phe Phe Asn Asn Val Ser Leu His His His Met Gln Val Met Glu Glu
            420                 425                 430

Val Val Arg Arg Asp Lys Asn His Pro Ala Val Val Met Trp Ser Val
            435                 440                 445

Ala Asn Glu Pro Ala Ser His Leu Glu Ser Ala Gly Tyr Tyr Leu Lys
    450                 455                 460

Met Val Ile Ala His Thr Lys Ser Leu Asp Pro Ser Arg Pro Val Thr
465                 470                 475                 480

Phe Val Ser Asn Ser Asn Tyr Ala Ala Asp Lys Gly Ala Pro Tyr Val
            485                 490                 495

Asp Val Ile Cys Leu Asn Ser Tyr Tyr Ser Trp Tyr His Asp Tyr Gly
            500                 505                 510

His Leu Glu Leu Ile Gln Leu Gln Leu Ala Thr Gln Phe Glu Asn Trp
            515                 520                 525

Tyr Lys Lys Tyr Gln Lys Pro Ile Ile Gln Ser Glu Tyr Gly Ala Glu
    530                 535                 540

Thr Ile Ala Gly Phe His Gln Asp Pro Pro Leu Met Phe Thr Glu Glu
545                 550                 555                 560

Tyr Gln Lys Ser Leu Leu Glu Gln Tyr His Leu Gly Leu Asp Gln Lys
            565                 570                 575
```

```
Arg Arg Lys Tyr Val Val Gly Glu Leu Ile Trp Asn Phe Ala Asp Phe
            580                 585                 590


Met Thr Glu Gln Ser Pro Thr Arg Val Leu Gly Asn Lys Lys Gly Ile
            595                 600                 605


Phe Thr Arg Gln Arg Gln Pro Lys Ser Ala Ala Phe Leu Leu Arg Glu
    610                 615                 620


Arg Tyr Trp Lys Ile Ala Asn Glu Thr Arg Tyr Pro His Ser Val Ala
625                 630                 635                 640


Lys Ser Gln Cys Leu Glu Asn Ser Pro Phe Thr
            645                 650


<210>   2402
<211>   119
<212>   PRT
<213>   Homo sapiens

<400>   2402

Met Ser Arg Ser Val Ala Leu Ala Val Leu Ala Leu Leu Ser Leu Ser
1               5                   10                  15


Gly Leu Glu Ala Ile Gln Arg Thr Pro Lys Ile Gln Val Tyr Ser Arg
            20                  25                  30


His Pro Ala Glu Asn Gly Lys Ser Asn Phe Leu Asn Cys Tyr Val Ser
        35                  40                  45


Gly Phe His Pro Ser Asp Ile Glu Val Asp Leu Leu Lys Asn Gly Glu
    50                  55                  60


Arg Ile Glu Lys Val Glu His Ser Asp Leu Ser Phe Ser Lys Asp Trp
65                  70                  75                  80


Ser Phe Tyr Leu Leu Tyr Tyr Thr Glu Phe Thr Pro Thr Glu Lys Asp
            85                  90                  95


Glu Tyr Ala Cys Arg Val Asn His Val Thr Leu Ser Gln Pro Lys Ile
            100                 105                 110


Val Lys Trp Asp Arg Asp Met
        115


<210>   2403
<211>   228
```

```
<212>  PRT
<213>  Homo sapiens

<400>  .2403

Met Ser Val Ser Glu Ile Phe Val Glu Leu Gln Gly Phe Leu Ala Ala
1               5                   10                  15

Glu Gln Asp Ile Arg Glu Glu Ile Arg Lys Val Val Gln Ser Leu Glu
            20                  25                  30

Gln Thr Ala Arg Glu Ile Leu Thr Leu Leu Gln Gly Val His Gln Gly
        35                  40                  45

Ala Gly Phe Gln Asp Ile Pro Lys Arg Cys Leu Lys Ala Arg Glu His
    50                  55                  60

Phe Gly Thr Val Lys Thr His Leu Thr Ser Leu Thr Lys Thr Lys Phe Pro
65                  70                  75                  80

Ala Glu Gln Tyr Tyr Arg Phe His Glu His Trp Arg Phe Val Leu Gln
            85                  90                  95

Arg Leu Val Phe Leu Ala Ala Phe Val Val Tyr Leu Glu Thr Glu Thr
        100                 105                 110

Leu Val Thr Arg Glu Ala Val Thr Glu Ile Leu Gly Ile Glu Pro Asp
        115                 120                 125

Arg Glu Lys Gly Phe His Leu Asp Val Glu Asp Tyr Leu Ser Gly Val
    130                 135                 140

Leu Ile Leu Ala Ser Glu Leu Ser Arg Leu Ser Val Asn Ser Val Thr
145                 150                 155                 160

Ala Gly Asp Tyr Ser Arg Pro Leu His Ile Ser Thr Phe Ile Asn Glu
            165                 170                 175

Leu Asp Ser Gly Phe Arg Leu Leu Asn Leu Lys Asn Asp Ser Leu Arg
            180                 185                 190

Lys Arg Tyr Asp Gly Leu Lys Tyr Asp Val Lys Lys Val Glu Glu Val
        195                 200                 205

Val Tyr Asp Leu Ser Ile Arg Gly Phe Asn Lys Glu Thr Ala Ala Ala
    210                 215                 220
```

Cys Val Glu Lys
225

<210> 2404
<211> 378
<212> PRT
<213> Homo sapiens

<400> 2404

Met Asp Leu Gly Lys Pro Met Lys Ser Val Leu Val Val Ala Leu Leu
1   5   10   15

Val Ile Phe Gln Val Cys Leu Cys Gln Asp Glu Val Thr Asp Asp Tyr
                20   25   30

Ile Gly Asp Asn Thr Thr Val Asp Tyr Thr Leu Phe Glu Ser Leu Cys
            35   40   45

Ser Lys Lys Asp Val Arg Asn Phe Lys Ala Trp Phe Leu Pro Ile Met
        50   55   60

Tyr Ser Ile Ile Cys Phe Val Gly Leu Leu Gly Asn Gly Leu Val Val
65   70   75   80

Leu Thr Tyr Ile Tyr Phe Lys Arg Leu Lys Thr Met Thr Asp Thr Tyr
                85   90   95

Leu Leu Asn Leu Ala Val Ala Asp Ile Leu Phe Leu Leu Thr Leu Pro
            100   105   110

Phe Trp Ala Tyr Ser Ala Ala Lys Ser Trp Val Phe Gly Val His Phe
        115   120   125

Cys Lys Leu Ile Phe Ala Ile Tyr Lys Met Ser Phe Phe Ser Gly Met
        130   135   140

Leu Leu Leu Leu Cys Ile Ser Ile Asp Arg Tyr Val Ala Ile Val Gln
145   150   155   160

Ala Val Ser Ala His Arg His Arg Ala Arg Val Leu Leu Ile Ser Lys
                165   170   175

Leu Ser Cys Val Gly Ile Trp Ile Leu Ala Thr Val Leu Ser Ile Pro
            180   185   190

Glu Leu Leu Tyr Ser Asp Leu Gln Arg Ser Ser Ser Glu Gln Ala Met
        195   200   205

```
Arg Cys Ser Leu Ile Thr Glu His Val Glu Ala Phe Ile Thr Ile Gln
    210                 215                 220

Val Ala Gln Met Val Ile Gly Phe Leu Val Pro Leu Leu Ala Met Ser
225                 230                 235                 240

Phe Cys Tyr Leu Val Ile Ile Arg Thr Leu Leu Gln Ala Arg Asn Phe
                245                 250                 255

Glu Arg Asn Lys Ala Ile Lys Val Ile Ile Ala Val Val Val Val Phe
            260                 265                 270

Ile Val Phe Gln Leu Pro Tyr Asn Gly Val Val Leu Ala Gln Thr Val
        275                 280                 285

Ala Asn Phe Asn Ile Thr Ser Ser Thr Cys Glu Leu Ser Lys Gln Leu
    290                 295                 300

Asn Ile Ala Tyr Asp Val Thr Tyr Ser Leu Ala Cys Val Arg Cys Cys
305                 310                 315                 320

Val Asn Pro Phe Leu Tyr Ala Phe Ile Gly Val Lys Phe Arg Asn Asp
                325                 330                 335

Leu Phe Lys Leu Phe Lys Asp Leu Gly Cys Leu Ser Gln Glu Gln Leu
            340                 345                 350

Arg Gln Trp Ser Ser Cys Arg His Ile Arg Arg Ser Ser Met Ser Val
    355                 360                 365

Glu Ala Glu Thr Thr Thr Thr Phe Ser Pro
    370                 375
```

```
<210>  2405
<211>  398
<212>  PRT
<213>  Homo sapiens

<400>  2405

Met Leu Arg Leu Tyr Val Leu Val Met Gly Val Ser Ala Phe Thr Leu
1                 5                 10                 15

Gln Pro Ala Ala His Thr Gly Ala Ala Arg Ser Cys Arg Phe Arg Gly
        20                 25                 30
```

Arg His Tyr Lys Arg Glu Phe Arg Leu Glu Gly Glu Pro Val Ala Leu
        35   40   45

Arg Cys Pro Gln Val Pro Tyr Trp Leu Trp Ala Ser Val Ser Pro Arg
    50   55   60

Ile Asn Leu Thr Trp His Lys Asn Asp Ser Ala Arg Thr Val Pro Gly
65   70   75   80

Glu Glu Glu Thr Arg Met Trp Ala Gln Asp Gly Ala Leu Trp Leu Leu
            85   90   95

Pro Ala Leu Gln Glu Asp Ser Gly Thr Tyr Val Cys Thr Thr Arg Asn
            100   105   110

Ala Ser Tyr Cys Asp Lys Met Ser Ile Glu Leu Arg Val Phe Glu Asn
        115   120   125

Thr Asp Ala Phe Leu Pro Phe Ile Ser Tyr Pro Gln Ile Leu Thr Leu
    130   135   140

Ser Thr Ser Gly Val Leu Val Cys Pro Asp Leu Ser Glu Phe Thr Arg
145   150   155   160

Asp Lys Thr Asp Val Lys Ile Gln Trp Tyr Lys Asp Ser Leu Leu Leu
                165   170   175

Asp Lys Asp Asn Glu Lys Phe Leu Ser Val Arg Gly Thr Thr His Leu
            180   185   190

Leu Val His Asp Val Ala Leu Glu Asp Ala Gly Tyr Tyr Arg Cys Val
        195   200   205

Leu Thr Phe Ala His Glu Gly Gln Gln Tyr Asn Ile Thr Arg Ser Ile
    210   215   220

Glu Leu Arg Ile Lys Lys Lys Lys Glu Glu Thr Ile Pro Val Ile Ile
225   230   235   240

Ser Pro Leu Lys Thr Ile Ser Ala Ser Leu Gly Ser Arg Leu Thr Ile
            245   250   255

Pro Cys Lys Val Phe Leu Gly Thr Gly Thr Pro Leu Thr Thr Met Leu
        260   265   270

Trp Trp Thr Ala Asn Asp Thr His Ile Glu Ser Ala Tyr Pro Gly Gly

```
        275                  280                         285
```

```
Arg Val Thr Glu Gly Pro Arg Gln Glu Tyr Ser Glu Asn Asn Glu Asn
     290                  295                  300
```

```
Tyr Ile Glu Val Pro Leu Ile Phe Asp Pro Val Thr Arg Glu Asp Leu
305                  310                  315                  320
```

```
His Met Asp Phe Lys Cys Val Val His Asn Thr Leu Ser Phe Gln Thr
                 325                  330                  335
```

```
Leu Arg Thr Thr Val Lys Glu Ala Ser Ser Thr Phe Ser Trp Gly Ile
                 340                  345                  350
```

```
Val Leu Ala Pro Leu Ser Leu Ala Phe Leu Val Leu Gly Gly Ile Trp
                 355                  360                  365
```

```
Met His Arg Arg Cys Lys His Arg Thr Gly Lys Ala Asp Gly Leu Thr
     370                  375                  380
```

```
Val Leu Trp Pro His His Gln Asp Phe Gln Ser Tyr Pro Lys
385                  390                  395
```

```
<210>  2406
<211>  132
<212>  PRT
<213>  Homo sapiens

<400>  2406
```

```
Met Glu Phe Asp Leu Asn Gly Asn Gly Asp Ile Gly Glu Lys Arg Val
1              5                  10                  15
```

```
Ile Cys Gly Gly Arg Val Val Cys Arg Pro Lys Lys Thr Glu Val Ser
           20                  25                  30
```

```
Pro Thr Cys Ser Ile Pro His Asp Leu Gly Gly Gly Pro Pro Thr Thr
           35                  40                  45
```

```
Val Gly Gly Arg Arg Met Gly Met Arg Lys Trp Glu Arg Arg Glu Arg
     50                  55                  60
```

```
Val Ser Pro Pro Ser Pro His Pro His Pro Leu Pro Pro Asp Ile Met
65                  70                  75                  80
```

```
Ser Leu Lys Arg Met Leu Glu Lys Leu Gly Val Pro Lys Thr His Leu
                 85                  90                  95
```

```
Glu Leu Lys Lys Leu Ile Gly Glu Val Ser Ser Gly Ser Gly Glu Thr
              100                 105                 110


Phe Ser Tyr Pro Asp Phe Leu Arg Met Met Leu Gly Lys Arg Ser Ala
          115                 120                 125


Ile Leu Lys Met
        130
```

```
<210> 2407
<211> 587
<212> PRT
<213> Homo sapiens

<400> 2407
```

```
Met Val Thr Ala Ala Met Leu Leu Gln Cys Cys Pro Val Leu Ala Arg
1                   5                   10                  15


Gly Pro Thr Ser Leu Leu Gly Lys Val Val Lys Thr His Gln Phe Leu
              20                  25                  30


Phe Gly Ile Gly Arg Cys Pro Ile Leu Ala Thr Gln Gly Pro Asn Cys
          35                  40                  45


Ser Gln Ile His Leu Lys Ala Thr Lys Ala Gly Gly Asp Ser Pro Ser
    50                  55                  60


Trp Ala Lys Gly His Cys Pro Phe Met Leu Ser Glu Leu Gln Asp Gly
65                  70                  75                  80


Lys Ser Lys Ile Val Gln Lys Ala Ala Pro Glu Val Gln Glu Asp Val
              85                  90                  95


Lys Ala Phe Lys Thr Asp Leu Pro Ser Ser Leu Val Ser Val Ser Leu
          100                 105                 110


Arg Lys Pro Phe Ser Gly Pro Gln Glu Gln Glu Gln Ile Ser Gly Lys
          115                 120                 125


Val Thr His Leu Ile Gln Asn Asn Met Pro Gly Asn Tyr Val Phe Ser
        130                 135                 140


Tyr Asp Gln Phe Phe Arg Asp Lys Ile Met Glu Lys Lys Gln Asp His
145                 150                 155                 160


Thr Tyr Arg Val Phe Lys Thr Val Asn Arg Trp Ala Asp Ala Tyr Pro
```

```
                    165              170              175

Phe Ala Gln His Phe Phe Glu Ala Ser Val Ala Ser Lys Asp Val Ser
              180              185              190

Val Trp Cys Ser Asn Asp Tyr Leu Gly Met Ser Arg His Pro Gln Val
              195              200              205

Leu Gln Ala Thr Gln Glu Thr Leu Gln Arg His Gly Ala Gly Ala Gly
    210              215              220

Gly Thr Arg Asn Ile Ser Gly Thr Ser Lys Phe His Val Glu Leu Glu
225              230              235              240

Gln Glu Leu Ala Glu Leu His Gln Lys Asp Ser Ala Leu Leu Phe Ser
              245              250              255

Ser Cys Phe Val Ala Asn Asp Ser Thr Leu Phe Thr Leu Ala Lys Ile
              260              265              270

Leu Pro Gly Cys Glu Ile Tyr Ser Asp Ala Gly Asn His Ala Ser Met
              275              280              285

Ile Gln Gly Ile Arg Asn Ser Gly Ala Ala Lys Phe Val Phe Arg His
    290              295              300

Asn Asp Pro Asp His Leu Lys Lys Leu Leu Glu Lys Ser Asn Pro Lys
305              310              315              320

Ile Pro Lys Ile Val Ala Phe Glu Thr Val His Ser Met Asp Gly Ala
              325              330              335

Ile Cys Pro Leu Glu Glu Leu Cys Asp Val Ser His Gln Tyr Gly Ala
              340              345              350

Leu Thr Phe Val Asp Glu Val His Ala Val Gly Leu Tyr Gly Ser Arg
              355              360              365

Gly Ala Gly Ile Gly Glu Arg Asp Gly Ile Met His Lys Ile Asp Ile
    370              375              380

Ile Ser Gly Thr Leu Gly Lys Ala Phe Gly Cys Val Gly Gly Tyr Ile
385              390              395              400

Ala Ser Thr Arg Asp Leu Val Asp Met Val Arg Ser Tyr Ala Ala Gly
              405              410              415
```

```
Phe Ile Phe Thr Thr Ser Leu Pro Pro Met Val Leu Ser Gly Ala Leu
            420                 425                 430


Glu Ser Val Arg Leu Leu Lys Gly Glu Glu Gly Gln Ala Leu Arg Arg
            435                 440                 445


Ala His Gln Arg Asn Val Lys His Met Arg Gln Leu Leu Met Asp Arg
    450                 455                 460


Gly Leu Pro Val Ile Pro Cys Pro Ser His Ile Ile Pro Ile Arg Val
465                 470                 475                 480


Gly Asn Ala Ala Leu Asn Ser Lys Leu Cys Asp Leu Leu Leu Ser Lys
            485                 490                 495


His Gly Ile Tyr Val Gln Ala Ile Asn Tyr Pro Thr Val Pro Arg Gly
            500                 505                 510


Glu Glu Leu Leu Arg Leu Ala Pro Ser Pro His His Ser Pro Gln Met
            515                 520                 525


Met Glu Asp Phe Val Glu Lys Leu Leu Leu Ala Trp Thr Ala Val Gly
    530                 535                 540


Leu Pro Leu Gln Asp Val Ser Val Ala Ala Cys Asn Phe Cys Arg Arg
545                 550                 555                 560


Pro Val His Phe Glu Leu Met Ser Glu Trp Glu Arg Ser Tyr Phe Gly
            565                 570                 575


Asn Met Gly Pro Gln Tyr Val Thr Thr Tyr Ala
            580                 585


<210>  2408
<211>  122
<212>  PRT
<213>  Homo sapiens

<400>  2408

Met Ser Ala Thr Trp Cys Ser Pro Glu Gly Gln Gly Met Gly Gln Gly
1               5                   10                  15


Pro Gly Arg Glu Val Gly Gly Asn Ser Ala Ala Ser Gly Pro Ala Ser
            20                  25                  30
```

```
Pro Ile Arg Asp Pro Cys Leu Ser Glu Ala Gly Leu Lys Gly Pro Pro
        35                  40                  45

Ser Ala His Pro Arg Arg Leu Cys Leu Leu His Arg Leu Val Cys Phe
    50                  55                  60

Ser Gly Gly Leu Thr Ser Ile Gln Leu Ser Pro Arg Thr Cys Cys Ser
65                  70                  75                  80

His Gln Trp Ala Gln Leu Phe Ser Pro Ala Cys Phe Pro Gln Trp Arg
                85                  90                  95

Ala Pro Gly Cys Ser Leu Asp Asp Ser Arg Ser Leu Thr Arg Ile Arg
            100                 105                 110

Pro Val His Leu Pro Gly Pro Ser Leu Asp
            115                 120
```

```
<210>  2409
<211>  288
<212>  PRT
<213>  Homo sapiens

<400>  2409
```

```
Met Gly His Thr Arg Arg Gln Gly Thr Ser Pro Ser Lys Cys Pro Tyr
1                   5                   10                  15

Leu Asn Phe Phe Gln Leu Val Leu Ala Gly Leu Ser His Phe Cys
            20                  25                  30

Ser Gly Val Ile His Val Thr Lys Glu Val Lys Glu Val Ala Thr Leu
        35                  40                  45

Ser Cys Gly His Asn Val Ser Val Glu Glu Leu Ala Gln Thr Arg Ile
    50                  55                  60

Tyr Trp Gln Lys Glu Lys Lys Met Val Leu Thr Met Met Ser Gly Asp
65                  70                  75                  80

Met Asn Ile Trp Pro Glu Tyr Lys Asn Arg Thr Ile Phe Asp Ile Thr
                85                  90                  95

Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly
            100                 105                 110

Thr Tyr Glu Cys Val Val Leu Lys Tyr Glu Lys Asp Ala Phe Lys Arg
        115                 120                 125
```

```
Glu His Leu Ala Glu Val Thr Leu Ser Val Lys Ala Asp Phe Pro Thr
    130                 135                 140


Pro Ser Ile Ser Asp Phe Glu Ile Pro Thr Ser Asn Ile Arg Arg Ile
145                 150                 155                 160


Ile Cys Ser Thr Ser Gly Gly Phe Pro Glu Pro His Leu Ser Trp Leu
                165                 170                 175


Glu Asn Gly Glu Glu Leu Asn Ala Ile Asn Thr Thr Val Ser Gln Asp
            180                 185                 190


Pro Glu Thr Glu Leu Tyr Ala Val Ser Ser Lys Leu Asp Phe Asn Met
        195                 200                 205


Thr Thr Asn His Ser Phe Met Cys Leu Ile Lys Tyr Gly His Leu Arg
    210                 215                 220


Val Asn Gln Thr Phe Asn Trp Asn Thr Thr Lys Gln Glu His Phe Pro
225                 230                 235                 240

                                                        )
Asp Asn Leu Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Val Asn Gly
                245                 250                 255


Ile Phe Val Ile Cys Cys Leu Thr Tyr Cys Phe Ala Pro Arg Cys Arg
                260                 265                 270


Glu Arg Arg Arg Asn Glu Arg Leu Arg Arg Glu Ser Val Arg Pro Val
        275                 280                 285


<210>  2410
<211>  588
<212>  PRT
<213>  Homo sapiens

<400>  2410

Met His Cys Lys Val Ser Leu Leu Asp Asp Thr Val Tyr Glu Cys Val
1               5                   10                  15


Val Glu Lys His Ala Lys Gly Gln Asp Leu Leu Lys Arg Val Cys Glu
            20                  25                  30


His Leu Asn Leu Leu Glu Glu Asp Tyr Phe Gly Leu Ala Ile Trp Asp
        35                  40                  45
```

Asn Ala Thr Ser Lys Thr Trp Leu Asp Ser Ala Lys Glu Ile Lys Lys
    50   55   60

Gln Val Arg Gly Val Pro Trp Asn Phe Thr Phe Asn Val Lys Phe Tyr
65   70   75   80

Pro Pro Asp Pro Ala Gln Leu Thr Glu Asp Ile Thr Arg Tyr Tyr Leu
                85   90   95

Cys Leu Gln Leu Arg Gln Asp Ile Val Ala Gly Arg Leu Pro Cys Ser
            100   105   110

Phe Ala Thr Leu Ala Leu Leu Gly Ser Tyr Thr Ile Gln Ser Glu Leu
            115   120   125

Gly Asp Tyr Asp Pro Glu Leu His Gly Val Asp Tyr Val Ser Asp Phe
    130   135   140

Lys Leu Ala Pro Asn Gln Thr Lys Glu Leu Glu Glu Lys Val Met Glu
145   150   155   160

Leu His Lys Ser Tyr Arg Ser Met Thr Pro Ala Gln Ala Asp Leu Glu
                165   170   175

Phe Leu Glu Asn Ala Lys Lys Leu Ser Met Tyr Gly Val Asp Leu His
            180   185   190

Lys Ala Lys Asp Leu Glu Gly Val Asp Ile Ile Leu Gly Val Cys Ser
            195   200   205

Ser Gly Leu Leu Val Tyr Lys Asp Lys Leu Arg Ile Asn Arg Phe Pro
    210   215   220

Trp Pro Lys Val Leu Lys Ile Ser Tyr Lys Arg Ser Ser Phe Phe Ile
225   230   235   240

Lys Ile Arg Pro Gly Glu Gln Glu Gln Tyr Glu Ser Thr Ile Gly Phe
            245   250   255

Lys Leu Pro Ser Tyr Arg Ala Ala Lys Lys Leu Trp Lys Val Cys Val
            260   265   270

Glu His His Thr Phe Phe Arg Leu Thr Ser Thr Asp Thr Ile Pro Lys
        275   280   285

Ser Lys Phe Leu Ala Leu Gly Ser Lys Phe Arg Tyr Ser Gly Arg Thr

290   295   300

Gln Ala Gln Thr Arg Gln Ala Ser Ala Leu Ile Asp Arg Pro Ala Pro
305   310   315   320

His Phe Glu Arg Thr Ala Ser Lys Arg Ala Ser Arg Ser Leu Asp Gly
                     325   330   335

Ala Ala Ala Val Asp Ser Ala Asp Arg Ser Pro Arg Pro Thr Ser Ala
                     340   345   350

Pro Ala Ile Thr Gln Gly Gln Val Ala Glu Gly Gly Val Leu Asp Ala
                     355   360   365

Ser Ala Lys Lys Thr Val Val Pro Lys Ala Gln Lys Glu Thr Val Lys
          370   375   380

Ala Glu Val Lys Lys Glu Asp Glu Pro Pro Glu Gln Ala Glu Pro Glu
385   390   395   400

Pro Thr Glu Ala Trp Lys Lys Lys Arg Glu Arg Leu Asp Gly Glu Asn
                     405   410   415

Ile Tyr Ile Arg His Ser Asn Leu Met Leu Glu Asp Leu Asp Lys Ser
                     420   425   430

Gln Glu Glu Ile Lys Lys His His Ala Ser Ile Ser Glu Leu Lys Lys
          435   440   445

Asn Phe Met Glu Ser Val Pro Glu Pro Arg Pro Ser Glu Trp Asp Lys
          450   455   460

Arg Leu Ser Thr His Ser Pro Phe Arg Thr Leu Asn Ile Asn Gly Gln
465   470   475   480

Ile Pro Thr Gly Glu Gly Pro Pro Leu Val Lys Thr Gln Thr Val Thr
                     485   490   495

Ile Ser Asp Asn Ala Asn Ala Val Lys Ser Glu Ile Pro Thr Lys Asp
          500   505   510

Val Pro Ile Val His Thr Glu Thr Lys Thr Ile Thr Tyr Glu Ala Ala
          515   520   525

Gln Thr Val Lys Gly Gly Ile Ser Glu Thr Arg Ile Glu Lys Arg Ile
          530   535   540

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```
Val Ile Thr Gly Asp Ala Asp Ile Asp His Asp Gln Val Leu Val Gln
545                 550                 555                 560


Ala Ile Lys Glu Ala Lys Glu Gln His Pro Asp Met Ser Val Thr Lys
                565                 570                 575


Val Val Val His Gln Glu Thr Glu Ile Ala Asp Glu
            580                 585


<210>  2411
<211>  982
<212>  PRT
<213>  Homo sapiens

<400>  2411

Met Ala Asn Ser Met Asn Gly Arg Asn Pro Gly Gly Arg Gly Gly Asn
1               5                   10                  15


Pro Arg Lys Gly Arg Ile Leu Gly Ile Ile Asp Ala Ile Gln Asp Ala
            20                  25                  30


Val Gly Pro Pro Lys Gln Ala Ala Ala Asp Arg Arg Thr Val Glu Lys
        35                  40                  45


Thr Trp Lys Leu Met Asp Lys Val Val Arg Leu Cys Gln Asn Pro Lys
    50                  55                  60


Leu Gln Leu Lys Asn Ser Pro Pro Tyr Ile Leu Asp Ile Leu Pro Asp
65                  70                  75                  80


Thr Tyr Gln His Leu Arg Leu Ile Leu Ser Lys Tyr Asp Asp Asn Gln
            85                  90                  95


Lys Leu Ala Gln Leu Ser Glu Asn Glu Tyr Phe Lys Ile Tyr Ile Asp
        100                 105                 110


Ser Leu Met Lys Lys Ser Lys Arg Ala Ile Arg Leu Phe Lys Glu Gly
        115                 120                 125


Lys Glu Arg Met Tyr Glu Glu Gln Ser Gln Asp Arg Arg Asn Leu Thr
    130                 135                 140


Lys Leu Ser Leu Ile Phe Ser His Met Leu Ala Glu Ile Lys Ala Ile
145                 150                 155                 160
```

Phe Pro Asn Gly Gln Phe Gln Gly Asp Asn Phe Arg Ile Thr Lys Ala
                 165   170   175

Asp Ala Ala Glu Phe Trp Arg Lys Phe Phe Gly Asp Lys Thr Ile Val
             180   185   190

Pro Trp Lys Val Phe Arg Gln Cys Leu His Glu Val His Gln Ile Ser
         195   200   205

Ser Gly Leu Glu Ala Met Ala Leu Lys Ser Thr Ile Asp Leu Thr Cys
     210   215   220

Asn Asp Tyr Ile Ser Val Phe Glu Phe Asp Ile Phe Thr Arg Leu Phe
225   230   235   240

Gln Pro Trp Gly Ser Ile Leu Arg Asn Trp Asn Phe Leu Ala Val Thr
             245   250   255

His Pro Gly Tyr Met Ala Phe Leu Thr Tyr Asp Glu Val Lys Ala Arg
             260   265   270

Leu Gln Lys Tyr Ser Thr Lys Pro Gly Ser Tyr Ile Phe Arg Leu Ser
         275   280   285

Cys Thr Arg Leu Gly Gln Trp Ala Ile Gly Tyr Val Thr Gly Asp Gly
     290   295   300

Asn Ile Leu Gln Thr Ile Pro His Asn Lys Pro Leu Phe Gln Ala Leu
305   310   315   320

Ile Asp Gly Ser Arg Glu Gly Phe Tyr Leu Tyr Pro Asp Gly Arg Ser
             325   330   335

Tyr Asn Pro Asp Leu Thr Gly Leu Cys Glu Pro Thr Pro His Asp His
             340   345   350

Ile Lys Val Thr Gln Glu Gln Tyr Glu Leu Tyr Cys Glu Met Gly Ser
         355   360   365

Thr Phe Gln Leu Cys Lys Ile Cys Ala Glu Asn Asp Lys Asp Val Lys
     370   375   380

Ile Glu Pro Cys Gly His Leu Met Cys Thr Ser Cys Leu Thr Ala Trp
385   390   395   400

Gln Glu Ser Asp Gly Gln Gly Cys Pro Phe Cys Arg Cys Glu Ile Lys

<pre>
                    405   410   415

  Gly Thr Glu Pro Ile Ile Val Asp Pro Phe Asp Pro Arg Asp Glu Gly
                420   425   430

  Ser Arg Cys Cys Ser Ile Ile Asp Pro Phe Gly Met Pro Met Leu Asp
                435   440   445

  Leu Asp Asp Asp Asp Asp Arg Glu Glu Ser Leu Met Met Asn Arg Leu
       450   455   460

  Ala Asn Val Arg Lys Cys Thr Asp Arg Gln Asn Ser Pro Val Thr Ser
  465   470   475   480

  Pro Gly Ser Ser Pro Leu Ala Gln Arg Arg Lys Pro Gln Pro Asp Pro
                485   490   495

  Leu Gln Ile Pro His Leu Ser Leu Pro Pro Val Pro Pro Arg Leu Asp
                500   505   510

  Leu Ile Gln Lys Gly Ile Val Arg Ser Pro Cys Gly Ser Pro Thr Gly
                515   520   525

  Ser Pro Lys Ser Ser Pro Cys Met Val Arg Lys Gln Asp Lys Pro Leu
       530   535   540

  Pro Ala Pro Pro Pro Pro Leu Arg Asp Pro Pro Pro Pro Pro Pro Glu
  545   550   555   560

  Arg Pro Pro Pro Ile Pro Pro Asp Asn Arg Leu Ser Arg His Ile His
                565   570   575

  His Val Glu Ser Val Pro Ser Lys Asp Pro Pro Met Pro Leu Glu Ala
                580   585   590

  Trp Cys Pro Arg Asp Val Phe Gly Thr Asn Gln Leu Val Gly Cys Arg
                595   600   605

  Leu Leu Gly Glu Gly Ser Pro Lys Pro Gly Ile Thr Ala Ser Ser Asn
       610   615   620

  Val Asn Gly Arg His Ser Arg Val Gly Ser Asp Pro Val Leu Met Arg
  625   630   635   640

  Lys His Arg Arg His Asp Leu Pro Leu Glu Gly Ala Lys Val Phe Ser
                645   650   655
       ＼
</pre>

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Asn Gly His Leu Gly Ser Glu Glu Tyr Asp Val Pro Pro Arg Leu Ser
            660   665   670

Pro Pro Pro Pro Val Thr Thr Leu Leu Pro Ser Ile Lys Cys Thr Gly
        675   680   685

Pro Leu Ala Asn Ser Leu Ser Glu Lys Thr Arg Asp Pro Val Glu Glu
    690   695   700

Asp Asp Asp Glu Tyr Lys Ile Pro Ser Ser His Pro Val Ser Leu Asn
705   710   715   720

Ser Gln Pro Ser His Cys His Asn Val Lys Pro Pro Val Arg Ser Cys
            725   730   735

Asp Asn Gly His Cys Met Leu Asn Gly Thr His Gly Pro Ser Ser Glu
            740   745   750

Lys Lys Ser Asn Ile Pro Asp Leu Ser Ile Tyr Leu Lys Gly Asp Val
            755   760   765

Phe Asp Ser Ala Ser Asp Pro Val Pro Leu Pro Pro Ala Arg Pro Pro
    770   775   780

Thr Arg Asp Asn Pro Lys His Gly Ser Ser Leu Asn Arg Thr Pro Ser
785   790   795   800

Asp Tyr Asp Leu Leu Ile Pro Pro Leu Gly Glu Asp Ala Phe Asp Ala
            805   810   815

Leu Pro Pro Ser Leu Pro Pro Pro Pro Pro Ala Arg His Ser Leu
            820   825   830

Ile Glu His Ser Lys Pro Pro Gly Ser Ser Ser Arg Pro Ser Ser Gly
            835   840   845

Gln Asp Leu Phe Leu Leu Pro Ser Asp Pro Phe Val Asp Leu Ala Ser
    850   855   860

Gly Gln Val Pro Leu Pro Pro Ala Arg Arg Leu Pro Gly Glu Asn Val
865   870   875   880

Lys Thr Asn Arg Thr Ser Gln Asp Tyr Asp Gln Leu Pro Ser Cys Ser
            885   890   895

```
 Asp Gly Ser Gln Ala Pro Ala Arg Pro Pro Lys Pro Arg Pro Arg Arg
               900               905               910

 Thr Ala Pro Glu Ile His His Arg Lys Pro His Gly Pro Glu Ala Ala
               915               920               925

 Leu Glu Asn Val Asp Ala Lys Ile Ala Lys Leu Met Gly Glu Gly Tyr
       930               935               940

 Ala Phe Glu Glu Val Lys Arg Ala Leu Glu Ile Ala Gln Asn Asn Val
 945               950               955               960

 Glu Val Ala Arg Ser Ile Leu Arg Glu Phe Ala Phe Pro Pro Val
               965               970               975

 Ser Pro Arg Leu Asn Leu
               980


<210>  2412
<211>  352
<212>  PRT
<213>  Homo sapiens

<400>  2412

 Met Asp Tyr Gln Val Ser Ser Pro Ile Tyr Asp Ile Asn Tyr Tyr Thr
 1               5                 10                15

 Ser Glu Pro Cys Gln Lys Ile Asn Val Lys Gln Ile Ala Ala Arg Leu
               20                25                30

 Leu Pro Pro Leu Tyr Ser Leu Val Phe Ile Phe Gly Phe Val Gly Asn
       35                40                45

 Met Leu Val Ile Leu Ile Leu Ile Asn Cys Lys Arg Leu Lys Ser Met
       50                55                60

 Thr Asp Ile Tyr Leu Leu Asn Leu Ala Ile Ser Asp Leu Phe Phe Leu
 65               70                75                80

 Leu Thr Val Pro Phe Trp Ala His Tyr Ala Ala Ala Gln Trp Asp Phe
               85                90                95

 Gly Asn Thr Met Cys Gln Leu Leu Thr Gly Leu Tyr Phe Ile Gly Phe
               100               105               110

 Phe Ser Gly Ile Phe Phe Ile Ile Leu Leu Thr Ile Asp Arg Tyr Leu
```

```
            115                  120                  125


Ala Val Val His Ala Val Phe Ala Leu Lys Ala Arg Thr Val Thr Phe
    130                  135                  140


Gly Val Val Thr Ser Val Ile Thr Trp Val Val Ala Val Phe Ala Ser
145                  150                  155                  160


Leu Pro Gly Ile Ile Phe Thr Arg Ser Gln Lys Glu Gly Leu His Tyr
                 165                  170                  175


Thr Cys Ser Ser His Phe Pro Tyr Ser Gln Tyr Gln Phe Trp Lys Asn
             180                  185                  190


Phe Gln Thr Leu Lys Ile Val Ile Leu Gly Leu Val Leu Pro Leu Leu
         195                  200                  205


Val Met Val Ile Cys Tyr Ser Gly Ile Leu Lys Thr Leu Leu Arg Cys
    210                  215                  220


Arg Asn Glu Lys Lys Arg His Arg Ala Val Arg Leu Ile Phe Thr Ile
225                  230                  235                  240


Met Ile Val Tyr Phe Leu Trp Ala Pro Tyr Asn Ile Val Leu Leu
                 245                  250                  255


Leu Asn Thr Phe Gln Glu Phe Phe Gly Leu Asn Asn Cys Ser Ser Ser
             260                  265                  270


Asn Arg Leu Asp Gln Ala Met Gln Val Thr Glu Thr Leu Gly Met Thr
         275                  280                  285


His Cys Cys Ile Asn Pro Ile Ile Tyr Ala Phe Val Gly Glu Lys Phe
    290                  295                  300


Arg Asn Tyr Leu Leu Val Phe Phe Gln Lys His Ile Ala Lys Arg Phe
305                  310                  315                  320


Cys Lys Cys Cys Ser Ile Phe Gln Gln Glu Ala Pro Glu Arg Ala Ser
                 325                  330                  335


Ser Val Tyr Thr Arg Ser Thr Gly Glu Gln Glu Ile Ser Val Gly Leu
             340                  345                  350


<210>  2413
<211>  750
```

```
<212>  PRT
<213>  Homo sapiens

<400>  2413

Met Gly Lys Ser Glu Ser Gln Met Asp Ile Thr Asp Ile Asn Thr Pro
1               5                   10                  15

Lys Pro Lys Lys Lys Gln Arg Trp Thr Arg Leu Glu Ile Ser Leu Ser
            20                  25                  30

Val Leu Val Leu Leu Leu Thr Ile Ile Ala Val Arg Met Ile Ala Leu
        35                  40                  45

Tyr Ala Thr Tyr Asp Asp Gly Ile Cys Lys Ser Ser Asp Cys Ile Lys
    50                  55                  60

Ser Ala Ala Arg Leu Ile Gln Asn Met Asp Ala Thr Thr Glu Pro Cys
65                  70                  75                  80

Arg Asp Phe Phe Lys Tyr Ala Cys Gly Gly Trp Leu Lys Arg Asn Val
                85                  90                  95

Ile Pro Glu Thr Ser Ser Arg Tyr Gly Asn Phe Asp Ile Leu Arg Asp
            100                 105                 110

Glu Leu Glu Val Val Leu Lys Asp Val Leu Gln Glu Pro Lys Thr Glu
        115                 120                 125

Asp Ile Val Ala Val Gln Lys Ala Lys Ala Leu Tyr Arg Ser Cys Ile
    130                 135                 140

Asn Glu Ser Ala Ile Asp Ser Arg Gly Gly Glu Pro Leu Leu Lys Leu
145                 150                 155                 160

Leu Pro Asp Ile Tyr Gly Trp Pro Val Ala Thr Glu Asn Trp Glu Gln
                165                 170                 175

Lys Tyr Gly Ala Ser Trp Thr Ala Glu Lys Ala Ile Ala Gln Leu Asn
            180                 185                 190

Ser Lys Tyr Gly Lys Lys Val Leu Ile Asn Leu Phe Val Gly Thr Asp
        195                 200                 205

Asp Lys Asn Ser Val Asn His Val Ile His Ile Asp Gln Pro Arg Leu
    210                 215                 220
```

Gly Leu Pro Ser Arg Asp Tyr Tyr Glu Cys Thr Gly Ile Tyr Lys Glu
225   230   235   240

Ala Cys Thr Ala Tyr Val Asp Phe Met Ile Ser Val Ala Arg Leu Ile
                245   250   255

Arg Gln Glu Glu Arg Leu Pro Ile Asp Glu Asn Gln Leu Ala Leu Glu
            260   265   270

Met Asn Lys Val Met Glu Leu Glu Lys Glu Ile Ala Asn Ala Thr Ala
        275   280   285

Lys Pro Glu Asp Arg Asn Asp Pro Met Leu Leu Tyr Asn Lys Met Arg
    290   295   300

Leu Ala Gln Ile Gln Asn Asn Phe Ser Leu Glu Ile Asn Gly Lys Pro
305   310   315   320

Phe Ser Trp Leu Asn Phe Thr Asn Glu Ile Met Ser Thr Val Asn Ile
                325   330   335

Ser Ile Thr Asn Glu Glu Asp Val Val Val Tyr Ala Pro Glu Tyr Leu
                340   345   350

Thr Lys Leu Lys Pro Ile Leu Thr Lys Tyr Ser Ala Arg Asp Leu Gln
        355   360   365

Asn Leu Met Ser Trp Arg Phe Ile Met Asp Leu Val Ser Ser Leu Ser
    370   375   380

Arg Thr Tyr Lys Glu Ser Arg Asn Ala Phe Arg Lys Ala Leu Tyr Gly
385   390   395   400

Thr Thr Ser Glu Thr Ala Thr Trp Arg Arg Cys Ala Asn Tyr Val Asn
                405   410   415

Gly Asn Met Glu Asn Ala Val Gly Arg Leu Tyr Val Glu Ala Ala Phe
                420   425   430

Ala Gly Glu Ser Lys His Val Val Glu Asp Leu Ile Ala Gln Ile Arg
            435   440   445

Glu Val Phe Ile Gln Thr Leu Asp Asp Leu Thr Trp Met Asp Ala Glu
    450   455   460

Thr Lys Lys Arg Ala Glu Glu Lys Ala Leu Ala Ile Lys Glu Arg Ile

465   470   475   480

Gly Tyr Pro Asp Asp Ile Val Ser Asn Asp Asn Lys Leu Asn Asn Glu
                 485   490   495

Tyr Leu Glu Leu Asn Tyr Lys Glu Asp Glu Tyr Phe Glu Asn Ile Ile
             500   505   510

Gln Asn Leu Lys Phe Ser Gln Ser Lys Gln Leu Lys Lys Leu Arg Glu
         515   520   525

Lys Val Asp Lys Asp Glu Trp Ile Ser Gly Ala Ala Val Val Asn Ala
     530   535   540

Phe Tyr Ser Ser Gly Arg Asn Gln Ile Val Phe Pro Ala Gly Ile Leu
545   550   555   560

Gln Pro Pro Phe Phe Ser Ala Gln Gln Ser Asn Ser Leu Asn Tyr Gly
             565   570   575

Gly Ile Gly Met Val Ile Gly His Glu Ile Thr His Gly Phe Asp Asp
             580   585   590

Asn Gly Arg Asn Phe Asn Lys Asp Gly Asp Leu Val Asp Trp Trp Thr
         595   600   605

Gln Gln Ser Ala Ser Asn Phe Lys Glu Gln Ser Gln Cys Met Val Tyr
     610   615   620

Gln Tyr Gly Asn Phe Ser Trp Asp Leu Ala Gly Gly Gln His Leu Asn
625   630   635   640

Gly Ile Asn Thr Leu Gly Glu Asn Ile Ala Asp Asn Gly Gly Leu Gly
             645   650   655

Gln Ala Tyr Arg Ala Tyr Gln Asn Tyr Ile Lys Lys Asn Gly Glu Glu
             660   665   670

Lys Leu Leu Pro Gly Leu Asp Leu Asn His Lys Gln Leu Phe Phe Leu
         675   680   685

Asn Phe Ala Gln Val Trp Cys Gly Thr Tyr Arg Pro Glu Tyr Ala Val
     690   695   700

Asn Ser Ile Lys Thr Asp Val His Ser Pro Gly Asn Phe Arg Ile Ile
705   710   715   720

Gly Thr Leu Gln Asn Ser Ala Glu Phe Ser Glu Ala Phe His Cys Arg
                725   730   735

Lys Asn Ser Tyr Met Asn Pro Glu Lys Lys Cys Arg Val Trp
            740   745   750

<210> 2414
<211> 233
<212> PRT
<213> Homo sapiens

<400> 2414

Met Asp Asn Gln Gly Val Ile Tyr Ser Asp Leu Asn Leu Pro Pro Asn
1   5   10   15

Pro Lys Arg Gln Gln Arg Lys Pro Lys Gly Asn Lys Ser Ser Ile Leu
            20   25   30

Ala Thr Glu Gln Glu Ile Thr Tyr Ala Glu Leu Asn Leu Gln Lys Ala
        35   40   45

Ser Gln Asp Phe Gln Gly Asn Asp Lys Thr Tyr His Cys Lys Asp Leu
    50   55   60

Pro Ser Ala Pro Glu Lys Leu Ile Val Gly Ile Leu Gly Ile Ile Cys
65   70   75   80

Leu Ile Leu Met Ala Ser Val Val Thr Ile Val Val Ile Pro Ser Thr
                85   90   95

Leu Ile Gln Arg His Asn Asn Ser Ser Leu Asn Thr Arg Thr Gln Lys
            100   105   110

Ala Arg His Cys Gly His Cys Pro Glu Glu Trp Ile Thr Tyr Ser Asn
        115   120   125

Ser Cys Tyr Tyr Ile Gly Lys Glu Arg Arg Thr Trp Glu Glu Ser Leu
    130   135   140

Leu Ala Cys Thr Ser Lys Asn Ser Ser Leu Leu Ser Ile Asp Asn Glu
145   150   155   160

Glu Glu Met Lys Phe Leu Ser Ile Ile Ser Pro Ser Ser Trp Ile Gly
            165   170   175

Val Phe Arg Asn Ser Ser His His Pro Trp Val Thr Met Asn Gly Leu
            180   185   190

Ala Phe Lys His Glu Ile Lys Asp Ser Asp Asn Ala Glu Leu Asn Cys
        195   200   205

Ala Val Leu Gln Val Asn Arg Leu Lys Ser Ala Gln Cys Gly Ser Ser
    210   215   220

Ile Ile Tyr His Cys Lys His Lys Leu
225   230

<210> 2415
<211> 290
<212> PRT
<213> Homo sapiens

<400> 2415

Met Gly Gly Gly Ala Gly Glu Arg Leu Phe Thr Ser Ser Cys Leu Val
1   5   10   15

Gly Leu Val Pro Leu Gly Leu Arg Ile Ser Leu Val Thr Cys Pro Leu
            20   25   30

Gln Cys Gly Ile Met Trp Gln Leu Leu Leu Pro Thr Ala Leu Leu Leu
        35   40   45

Leu Val Ser Ala Gly Met Arg Thr Glu Asp Leu Pro Lys Ala Val Val
    50   55   60

Phe Leu Glu Pro Gln Trp Tyr Arg Val Leu Glu Lys Asp Ser Val Thr
65   70   75   80

Leu Lys Cys Gln Gly Ala Tyr Ser Pro Glu Asp Asn Ser Thr Gln Trp
            85   90   95

Phe His Asn Glu Ser Leu Ile Ser Ser Gln Ala Ser Ser Tyr Phe Ile
            100   105   110

Asp Ala Ala Thr Val Asp Asp Ser Gly Glu Tyr Arg Cys Gln Thr Asn
        115   120   125

Leu Ser Thr Leu Ser Asp Pro Val Gln Leu Glu Val His Ile Gly Trp
    130   135   140

Leu Leu Leu Gln Ala Pro Arg Trp Val Phe Lys Glu Glu Asp Pro Ile
145   150   155   160

```
His Leu Arg Cys His Ser Trp Lys Asn Thr Ala Leu His Lys Val Thr
                165                 170                 175


Tyr Leu Gln Asn Gly Lys Gly Arg Lys Tyr Phe His His Asn Ser Asp
            180                 185                 190


Phe Tyr Ile Pro Lys Ala Thr Leu Lys Asp Ser Gly Ser Tyr Phe Cys
            195                 200                 205


Arg Gly Leu Val Gly Ser Lys Asn Val Ser Ser Glu Thr Val Asn Ile
    210                 215                 220


Thr Ile Thr Gln Gly Leu Ala Val Ser Thr Ile Ser Ser Phe Phe Pro
225                 230                 235                 240


Pro Gly Tyr Gln Val Ser Phe Cys Leu Val Met Val Leu Leu Phe Ala
            245                 250                 255


Val Asp Thr Gly Leu Tyr Phe Ser Val Lys Thr Asn Ile Arg Ser Ser
            260                 265                 270


Thr Arg Asp Trp Lys Asp His Lys Phe Lys Trp Arg Lys Asp Pro Gln
    275                 280                 285


Asp Lys
    290



<210>  2416
<211>  233
<212>  PRT
<213>  Homo sapiens

<400>  2416

Met Trp Gln Leu Leu Leu Pro Thr Ala Leu Leu Leu Leu Val Ser Ala
1               5                   10                  15


Gly Met Arg Thr Glu Asp Leu Pro Lys Ala Val Val Phe Leu Glu Pro
            20                  25                  30


Gln Trp Tyr Ser Val Leu Glu Lys Asp Ser Val Thr Leu Lys Cys Gln
        35                  40                  45


Gly Ala Tyr Ser Pro Glu Asp Asn Ser Thr Gln Trp Phe His Asn Glu
    50                  55                  60
```

```
Ser Leu Ile Ser Ser Gln Ala Ser Ser Tyr Phe Ile Asp Ala Ala Thr
65                  70                  75                  80


Val Asn Asp Ser Gly Glu Tyr Arg Cys Gln Thr Asn Leu Ser Thr Leu
                85                  90                  95


Ser Asp Pro Val Gln Leu Glu Val His Ile Gly Trp Leu Leu Leu Gln
            100                 105                 110


Ala Pro Arg Trp Val Phe Lys Glu Glu Asp Pro Ile His Leu Arg Cys
        115                 120                 125


His Ser Trp Lys Asn Thr Ala Leu His Lys Val Thr Tyr Leu Gln Asn
    130                 135                 140


Gly Lys Asp Arg Lys Tyr Phe His His Asn Ser Asp Phe His Ile Pro
145                 150                 155                 160


Lys Ala Thr Leu Lys Asp Ser Gly Ser Tyr Phe Cys Arg Gly Leu Val
                165                 170                 175


Gly Ser Lys Asn Val Ser Ser Glu Thr Val Asn Ile Thr Ile Thr Gln
            180                 185                 190


Gly Leu Ala Val Ser Thr Ile Ser Ser Phe Ser Pro Pro Gly Tyr Gln
        195                 200                 205


Val Ser Phe Cys Leu Val Met Val Leu Leu Phe Ala Val Asp Thr Gly
    210                 215                 220


Leu Tyr Phe Ser Val Lys Thr Asn Ile
225                 230


<210>  2417
<211>  525
<212>  PRT
<213>  Homo sapiens

<400>  2417

Met Trp Glu Ala Gln Phe Leu Gly Leu Leu Phe Leu Gln Pro Leu Trp
1               5                   10                  15


Val Ala Pro Val Lys Pro Leu Gln Pro Gly Ala Glu Val Pro Val Val
            20                  25                  30


Trp Ala Gln Glu Gly Ala Pro Ala Gln Leu Pro Cys Ser Pro Thr Ile
        35                  40                  45
```

Pro Leu Gln Asp Leu Ser Leu Leu Arg Arg Ala Gly Val Thr Trp Gln
    50   55   60

His Gln Pro Asp Ser Gly Pro Pro Ala Ala Ala Pro Gly His Pro Leu
65   70   75   80

Ala Pro Gly Pro His Pro Ala Ala Pro Ser Ser Trp Gly Pro Arg Pro
              85   90   95

Arg Arg Tyr Thr Val Leu Ser Val Gly Pro Gly Gly Leu Arg Ser Gly
            100   105   110

Arg Leu Pro Leu Gln Pro Arg Val Gln Leu Asp Glu Arg Gly Arg Gln
        115   120   125

Arg Gly Asp Phe Ser Leu Trp Leu Arg Pro Ala Arg Arg Ala Asp Ala
    130   135   140

Gly Glu Tyr Arg Ala Ala Val His Leu Arg Asp Arg Ala Leu Ser Cys
145   150   155   160

Arg Leu Arg Leu Arg Leu Gly Gln Ala Ser Met Thr Ala Ser Pro Pro
              165   170   175

Gly Ser Leu Arg Ala Ser Asp Trp Val Ile Leu Asn Cys Ser Phe Ser
              180   185   190

Arg Pro Asp Arg Pro Ala Ser Val His Trp Phe Arg Asn Arg Gly Gln
    195   200   205

Gly Arg Val Pro Val Arg Glu Ser Pro His His His Leu Ala Glu Ser
    210   215   220

Phe Leu Phe Leu Pro Gln Val Ser Pro Met Asp Ser Gly Pro Trp Gly
225   230   235   240

Cys Ile Leu Thr Tyr Arg Asp Gly Phe Asn Val Ser Ile Met Tyr Asn
              245   250   255

Leu Thr Val Leu Gly Leu Glu Pro Pro Thr Pro Leu Thr Val Tyr Ala
              260   265   270

Gly Ala Gly Ser Arg Val Gly Leu Pro Cys Arg Leu Pro Ala Gly Val
    275   280   285

```
Gly Thr Arg Ser Phe Leu Thr Ala Lys Trp Thr Pro Pro Gly Gly Gly
    290             295             300

Pro Asp Leu Leu Val Thr Gly Asp Asn Gly Asp Phe Thr Leu Arg Leu
305             310             315             320

Glu Asp Val Ser Gln Ala Gln Ala Gly Thr Tyr Thr Cys His Ile His
            325             330             335

Leu Gln Glu Gln Gln Leu Asn Ala Thr Val Thr Leu Ala Ile Ile Thr
            340             345             350

Val Thr Pro Lys Ser Phe Gly Ser Pro Gly Ser Leu Gly Lys Leu Leu
    355             360             365

Cys Glu Val Thr Pro Val Ser Gly Gln Glu Arg Phe Val Trp Ser Ser
    370             375             380

Leu Asp Thr Pro Ser Gln Arg Ser Phe Ser Gly Pro Trp Leu Glu Ala
385             390             395             400

Gln Glu Ala Gln Leu Leu Ser Gln Pro Trp Gln Cys Gln Leu Tyr Gln
            405             410             415

Gly Glu Arg Leu Leu Gly Ala Ala Val Tyr Phe Thr Glu Leu Ser Ser
            420             425             430

Pro Gly Ala Gln Arg Ser Gly Arg Ala Pro Gly Ala Leu Pro Ala Gly
    435             440             445

His Leu Leu Leu Phe Leu Thr Leu Gly Val Leu Ser Leu Leu Leu Leu
    450             455             460

Val Thr Gly Ala Phe Gly Phe His Leu Trp Arg Arg Gln Trp Arg Pro
465             470             475             480

Arg Arg Phe Ser Ala Leu Glu Gln Gly Ile His Pro Pro Gln Ala Gln
            485             490             495

Ser Lys Ile Glu Glu Leu Glu Gln Glu Pro Glu Pro Glu Pro Glu Pro
            500             505             510

Glu Pro Glu Pro Glu Pro Glu Pro Glu Pro Glu Gln Leu
    515             520             525
```

```
<210>  2418
<211>  738
<212>  PRT
<213>  Homo sapiens

<400>  2418
```

Met Gln Pro Arg Trp Ala Gln Gly Ala Thr Met Trp Leu Gly Val Leu
1   5   10   15

Leu Thr Leu Leu Leu Cys Ser Ser Leu Glu Gly Gln Glu Asn Ser Phe
            20   25   30

Thr Ile Asn Ser Val Asp Met Lys Ser Leu Pro Asp Trp Thr Val Gln
        35   40   45

Asn Gly Lys Asn Leu Thr Leu Gln Cys Phe Ala Asp Val Ser Thr Thr
    50   55   60

Ser His Val Lys Pro Gln His Gln Met Leu Phe Tyr Lys Asp Asp Val
65   70   75   80

Leu Phe Tyr Asn Ile Ser Ser Met Lys Ser Thr Glu Ser Tyr Phe Ile
            85   90   95

Pro Glu Val Arg Ile Tyr Asp Ser Gly Thr Tyr Lys Cys Thr Val Ile
            100   105   110

Val Asn Asn Lys Glu Lys Thr Thr Ala Glu Tyr Gln Val Leu Val Glu
    115   120   125

Gly Val Pro Ser Pro Arg Val Thr Leu Asp Lys Lys Glu Ala Ile Gln
    130   135   140

Gly Gly Ile Val Arg Val Asn Cys Ser Val Pro Glu Glu Lys Ala Pro
145   150   155   160

Ile His Phe Thr Ile Glu Lys Leu Glu Leu Asn Glu Lys Met Val Lys
            165   170   175

Leu Lys Arg Glu Lys Asn Ser Arg Asp Gln Asn Phe Val Ile Leu Glu
            180   185   190

Phe Pro Val Glu Glu Gln Asp Arg Val Leu Ser Phe Arg Cys Gln Ala
            195   200   205

Arg Ile Ile Ser Gly Ile His Met Gln Thr Ser Glu Ser Thr Lys Ser
    210   215   220

```
Glu Leu Val Thr Val Thr Glu Ser Phe Ser Thr Pro Lys Phe His Ile
225                 230                 235                 240


Ser Pro Thr Gly Met Ile Met Glu Gly Ala Gln Leu His Ile Lys Cys
                245                 250                 255


Thr Ile Gln Val Thr His Leu Ala Gln Glu Phe Pro Glu Ile Ile Ile
            260                 265                 270


Gln Lys Asp Lys Ala Ile Val Ala His Asn Arg His Gly Asn Lys Ala
        275                 280                 285


Val Tyr Ser Val Met Ala Met Val Glu His Ser Gly Asn Tyr Thr Cys
    290                 295                 300


Lys Val Glu Ser Ser Arg Ile Ser Lys Val Ser Ser Ile Val Val Asn
305                 310                 315                 320


Ile Thr Glu Leu Phe Ser Lys Pro Glu Leu Glu Ser Ser Phe Thr His
            325                 330                 335


Leu Asp Gln Gly Glu Arg Leu Asn Leu Ser Cys Ser Ile Pro Gly Ala
            340                 345                 350


Pro Pro Ala Asn Phe Thr Ile Gln Lys Glu Asp Thr Ile Val Ser Gln
        355                 360                 365


Thr Gln Asp Phe Thr Lys Ile Ala Ser Lys Ser Asp Ser Gly Thr Tyr
    370                 375                 380


Ile Cys Thr Ala Gly Ile Asp Lys Val Val Lys Lys Ser Asn Thr Val
385                 390                 395                 400


Gln Ile Val Val Cys Glu Met Leu Ser Gln Pro Arg Ile Ser Tyr Asp
                405                 410                 415


Ala Gln Phe Glu Val Ile Lys Gly Gln Thr Ile Glu Val Arg Cys Glu
            420                 425                 430


Ser Ile Ser Gly Thr Leu Pro Ile Ser Tyr Gln Leu Leu Lys Thr Ser
        435                 440                 445


Lys Val Leu Glu Asn Ser Thr Lys Asn Ser Asn Asp Pro Ala Val Phe
    450                 455                 460
```

```
Lys Asp Asn Pro Thr Glu Asp Val Glu Tyr Gln Cys Val Ala Asp Asn
465                 470                 475                 480


Cys His Ser His Ala Lys Met Leu Ser Glu Val Leu Arg Val Lys Val
                485                 490                 495


Ile Ala Pro Val Asp Glu Val Gln Ile Ser Ile Leu Ser Ser Lys Val
                500                 505                 510


Val Glu Ser Gly Glu Asp Ile Val Leu Gln Cys Ala Val Asn Glu Gly
            515                 520                 525


Ser Gly Pro Ile Thr Tyr Lys Phe Tyr Arg Glu Lys Glu Gly Lys Pro
        530                 535                 540


Phe Tyr Gln Met Thr Ser Asn Ala Thr Gln Ala Phe Trp Thr Lys Gln
545                 550                 555                 560


Lys Ala Asn Lys Glu Gln Glu Gly Glu Tyr Tyr Cys Thr Ala Phe Asn
                565                 570                 575


Arg Ala Asn His Ala Ser Ser Val Pro Arg Ser Lys Ile Leu Thr Val
            580                 585                 590


Arg Val Ile Leu Ala Pro Trp Lys Lys Gly Leu Ile Ala Val Val Ile
        595                 600                 605


Ile Gly Val Ile Ile Ala Leu Leu Ile Ile Ala Ala Lys Cys Tyr Phe
        610                 615                 620


Leu Arg Lys Ala Lys Ala Lys Gln Met Pro Val Glu Met Ser Arg Pro
625                 630                 635                 640


Ala Val Pro Leu Leu Asn Ser Asn Asn Glu Lys Met Ser Asp Pro Asn
                645                 650                 655


Met Glu Ala Asn Ser His Tyr Gly His Asn Asp Asp Val Gly Asn His
            660                 665                 670


Ala Met Lys Pro Ile Asn Asp Asn Lys Glu Pro Leu Asn Ser Asp Val
        675                 680                 685


Gln Tyr Thr Glu Val Gln Val Ser Ser Ala Glu Ser His Lys Asp Leu
    690                 695                 700
```

```
Gly Lys Lys Asp Thr Glu Thr Val Tyr Ser Glu Val Arg Lys Ala Val
705                 710                 715                 720


Pro Asp Ala Val Glu Ser Arg Tyr Ser Arg Thr Glu Gly Ser Leu Asp
                725                 730                 735


Gly Thr
```

```
<210>  2419
<211>  328
<212>  PRT
<213>  Homo sapiens

<400>  2419
```

```
Met Leu Val Arg Arg Gly Ala Arg Ala Gly Pro Arg Met Pro Arg Gly
1               5                   10                  15


Trp Thr Ala Leu Cys Leu Leu Ser Leu Leu Pro Ser Gly Phe Met Ser
            20                  25                  30


Leu Asp Asn Asn Gly Thr Ala Thr Pro Glu Leu Pro Thr Gln Gly Thr
        35                  40                  45


Phe Ser Asn Val Ser Thr Asn Val Ser Tyr Gln Glu Thr Thr Thr Pro
    50                  55                  60


Ser Thr Leu Gly Ser Thr Ser Leu His Pro Val Ser Gln His Gly Asn
65                  70                  75                  80


Glu Ala Thr Thr Asn Ile Thr Glu Thr Thr Val Lys Phe Thr Ser Thr
                85                  90                  95


Ser Val Ile Thr Ser Val Tyr Gly Asn Thr Asn Ser Ser Val Gln Ser
                100                 105                 110


Gln Thr Ser Val Ile Ser Thr Val Phe Thr Thr Pro Ala Asn Val Ser
        115                 120                 125


Thr Pro Glu Thr Thr Leu Lys Pro Ser Leu Ser Pro Gly Asn Val Ser
        130                 135                 140


Asp Leu Ser Thr Thr Ser Thr Ser Leu Ala Thr Ser Pro Thr Lys Pro
145                 150                 155                 160


Tyr Thr Ser Ser Ser Pro Ile Leu Ser Asp Ile Lys Ala Glu Ile Lys
                165                 170                 175
```

```
Cys Ser Gly Ile Arg Glu Val Lys Leu Thr Gln Gly Ile Cys Leu Glu
            180                 185                 190

Gln Asn Lys Thr Ser Ser Cys Ala Glu Phe Lys Lys Asp Arg Gly Glu
        195                 200                 205

Gly Leu Ala Arg Val Leu Cys Gly Glu Gln Ala Asp Ala Asp Ala
    210                 215                 220

Gly Ala Gln Val Cys Ser Leu Leu Leu Ala Gln Ser Glu Val Arg Pro
225                 230                 235                 240

Gln Cys Leu Leu Leu Val Leu Ala Asn Arg Thr Glu Ile Ser Ser Lys
                245                 250                 255

Leu Gln Leu Met Lys Lys His Gln Ser Asp Leu Lys Lys Leu Gly Ile
            260                 265                 270

Leu Asp Phe Thr Glu Gln Asp Val Ala Ser His Gln Ser Tyr Ser Gln
        275                 280                 285

Lys Thr Leu Ile Ala Leu Val Thr Ser Gly Ala Leu Leu Ala Val Leu
    290                 295                 300

Gly Ile Thr Gly Tyr Phe Leu Met Asn Arg Arg Ser Trp Ser Pro Thr
305                 310                 315                 320

Gly Glu Arg Leu Glu Leu Glu Pro
                325


<210>  2420
<211>  374
<212>  PRT
<213>  Homo sapiens

<400>  2420

Met Trp Phe Leu Thr Thr Leu Leu Leu Trp Val Pro Val Asp Gly Gln
1               5                   10                  15

Val Asp Thr Thr Lys Ala Val Ile Thr Leu Gln Pro Pro Trp Val Ser
            20                  25                  30

Val Phe Gln Glu Glu Thr Val Thr Leu His Cys Glu Val Leu His Leu
        35                  40                  45
```

```
Pro Gly Ser Ser Ser Thr Gln Trp Phe Leu Asn Gly Thr Ala Thr Gln
    50                  55                  60

Thr Ser Thr Pro Ser Tyr Arg Ile Thr Ser Ala Ser Val Asn Asp Ser
65                  70                  75                      80

Gly Glu Tyr Arg Cys Gln Arg Gly Leu Ser Gly Arg Ser Asp Pro Ile
                85                  90                  95

Gln Leu Glu Ile His Arg Gly Trp Leu Leu Leu Gln Val Ser Ser Arg
            100                 105                 110

Val Phe Thr Glu Gly Glu Pro Leu Ala Leu Arg Cys His Ala Trp Lys
        115                 120                 125

Asp Lys Leu Val Tyr Asn Val Leu Tyr Tyr Arg Asn Gly Lys Ala Phe
    130                 135                 140

Lys Phe Phe His Trp Asn Ser Asn Leu Thr Ile Leu Lys Thr Asn Ile
145                 150                 155                 160

Ser His Asn Gly Thr Tyr His Cys Ser Gly Met Gly Lys His Arg Tyr
                165                 170                 175

Thr Ser Ala Gly Ile Ser Val Thr Val Lys Glu Leu Phe Pro Ala Pro
            180                 185                 190

Val Leu Asn Ala Ser Val Thr Ser Pro Leu Leu Glu Gly Asn Leu Val
        195                 200                 205

Thr Leu Ser Cys Glu Thr Lys Leu Leu Leu Gln Arg Pro Gly Leu Gln
    210                 215                 220

Leu Tyr Phe Ser Phe Tyr Met Gly Ser Lys Thr Leu Arg Gly Arg Asn
225                 230                 235                 240

Thr Ser Ser Glu Tyr Gln Ile Leu Thr Ala Arg Arg Glu Asp Ser Gly
            245                 250                 255

Leu Tyr Trp Cys Glu Ala Ala Thr Glu Asp Gly Asn Val Leu Lys Arg
        260                 265                 270

Ser Pro Glu Leu Glu Leu Gln Val Leu Gly Leu Gln Leu Pro Thr Pro
        275                 280                 285

Val Trp Phe His Val Leu Phe Tyr Leu Ala Val Gly Ile Met Phe Leu
```

```
      290                        295                        300
```

```
Val Asn Thr Val Leu Trp Val Thr Ile Arg Lys Glu Leu Lys Arg Lys
305                      310                  315                  320
```

```
Lys Lys Trp Asp Leu Glu Ile Ser Leu Asp Ser Gly His Glu Lys Lys
                    325                  330                  335
```

```
Val Ile Ser Ser Leu Gln Glu Asp Arg His Leu Glu Glu Glu Leu Lys
              340                  345                  350
```

```
Cys Gln Glu Gln Lys Glu Glu Gln Leu Gln Glu Gly Val His Arg Lys
          355                  360                  365
```

```
Glu Pro Gln Gly Ala Thr
      370
```

```
<210>   2421
<211>   760
<212>   PRT
<213>   Homo sapiens
```

```
<400>   2421
```

```
Met Met Asp Gln Ala Arg Ser Ala Phe Ser Asn Leu Phe Gly Gly Glu
1                   5                   10                  15
```

```
Pro Leu Ser Tyr Thr Arg Phe Ser Leu Ala Arg Gln Val Asp Gly Asp
              20                  25                  30
```

```
Asn Ser His Val Glu Met Lys Leu Ala Val Asp Glu Glu Glu Asn Ala
          35                  40                  45
```

```
Asp Asn Asn Thr Lys Ala Asn Val Thr Lys Pro Lys Arg Cys Ser Gly
      50                  55                  60
```

```
Ser Ile Cys Tyr Gly Thr Ile Ala Val Ile Val Phe Phe Leu Ile Gly
65                  70                  75                  80
```

```
Phe Met Ile Gly Tyr Leu Gly Tyr Cys Lys Gly Val Glu Pro Lys Thr
              85                  90                  95
```

```
Glu Cys Glu Arg Leu Ala Gly Thr Glu Ser Pro Val Arg Glu Glu Pro
          100                 105                 110
```

```
Gly Glu Asp Phe Pro Ala Ala Arg Arg Leu Tyr Trp Asp Asp Leu Lys
          115                 120                 125
```

Arg Lys Leu Ser Glu Lys Leu Asp Ser Thr Asp Phe Thr Ser Thr Ile
    130   135   140

Lys Leu Leu Asn Glu Asn Ser Tyr Val Pro Arg Glu Ala Gly Ser Gln
145   150   155   160

Lys Asp Glu Asn Leu Ala Leu Tyr Val Glu Asn Gln Phe Arg Glu Phe
                165   170   175

Lys Leu Ser Lys Val Trp Arg Asp Gln His Phe Val Lys Ile Gln Val
            180   185   190

Lys Asp Ser Ala Gln Asn Ser Val Ile Ile Val Asp Lys Asn Gly Arg
            195   200   205

Leu Val Tyr Leu Val Glu Asn Pro Gly Gly Tyr Val Ala Tyr Ser Lys
    210   215   220

Ala Ala Thr Val Thr Gly Lys Leu Val His Ala Asn Phe Gly Thr Lys
225   230   235   240

Lys Asp Phe Glu Asp Leu Tyr Thr Pro Val Asn Gly Ser Ile Val Ile
                245   250   255

Val Arg Ala Gly Lys Ile Thr Phe Ala Glu Lys Val Ala Asn Ala Glu
            260   265   270

Ser Leu Asn Ala Ile Gly Val Leu Ile Tyr Met Asp Gln Thr Lys Phe
    275   280   285

Pro Ile Val Asn Ala Glu Leu Ser Phe Phe Gly His Ala His Leu Gly
    290   295   300

Thr Gly Asp Pro Tyr Thr Pro Gly Phe Pro Ser Phe Asn His Thr Gln
305   310   315   320

Phe Pro Pro Ser Arg Ser Ser Gly Leu Pro Asn Ile Pro Val Gln Thr
                325   330   335

Ile Ser Arg Ala Ala Ala Glu Lys Leu Phe Gly Asn Met Glu Gly Asp
            340   345   350

Cys Pro Ser Asp Trp Lys Thr Asp Ser Thr Cys Arg Met Val Thr Ser
    355   360   365

Glu Ser Lys Asn Val Lys Leu Thr Val Ser Asn Val Leu Lys Glu Ile
        370   375   380

Lys Ile Leu Asn Ile Phe Gly Val Ile Lys Gly Phe Val Glu Pro Asp
385   390   395   400

His Tyr Val Val Gly Ala Gln Arg Asp Ala Trp Gly Pro Gly Ala
                405   410   415

Ala Lys Ser Gly Val Gly Thr Ala Leu Leu Leu Lys Leu Ala Gln Met
            420   425   430

Phe Ser Asp Met Val Leu Lys Asp Gly Phe Gln Pro Ser Arg Ser Ile
        435   440   445

Ile Phe Ala Ser Trp Ser Ala Gly Asp Phe Gly Ser Val Gly Ala Thr
    450   455   460

Glu Trp Leu Glu Gly Tyr Leu Ser Ser Leu His Leu Lys Ala Phe Thr
465   470   475   480

Tyr Ile Asn Leu Asp Lys Ala Val Leu Gly Thr Ser Asn Phe Lys Val
            485   490   495

Ser Ala Ser Pro Leu Leu Tyr Thr Leu Ile Glu Lys Thr Met Gln Asn
            500   505   510

Val Lys His Pro Val Thr Gly Gln Phe Leu Tyr Gln Asp Ser Asn Trp
        515   520   525

Ala Ser Lys Val Glu Lys Leu Thr Leu Asp Asn Ala Ala Phe Pro Phe
    530   535   540

Leu Ala Tyr Ser Gly Ile Pro Ala Val Ser Phe Cys Phe Cys Glu Asp
545   550   555   560

Thr Asp Tyr Pro Tyr Leu Gly Thr Thr Met Asp Thr Tyr Lys Glu Leu
            565   570   575

Ile Glu Arg Ile Pro Glu Leu Asn Lys Val Ala Arg Ala Ala Ala Glu
            580   585   590

Val Ala Gly Gln Phe Val Ile Lys Leu Thr His Asp Val Glu Leu Asn
        595   600   605

Leu Asp Tyr Glu Arg Tyr Asn Ser Gln Leu Leu Ser Phe Val Arg Asp

```
        610                    615                    620
```

Leu Asn Gln Tyr Arg Ala Asp Ile Lys Glu Met Gly Leu Ser Leu Gln
625   630   635   640

Trp Leu Tyr Ser Ala Arg Gly Asp Phe Phe Arg Ala Thr Ser Arg Leu
                645   650   655

Thr Thr Asp Phe Gly Asn Ala Glu Lys Thr Asp Arg Phe Val Met Lys
                660   665   670

Lys Leu Asn Asp Arg Val Met Arg Val Glu Tyr His Phe Leu Ser Pro
            675   680   685

Tyr Val Ser Pro Lys Glu Ser Pro Phe Arg His Val Phe Trp Gly Ser
            690   695   700

Gly Ser His Thr Leu Pro Ala Leu Leu Glu Asn Leu Lys Leu Arg Lys
705   710   715   720

Gln Asn Asn Gly Ala Phe Asn Glu Thr Leu Phe Arg Asn Gln Leu Ala
                725   730   735

Leu Ala Thr Trp Thr Ile Gln Gly Ala Ala Asn Ala Leu Ser Gly Asp
                740   745   750

Val Trp Asp Ile Asp Asn Glu Phe
            755   760

<210> 2422
<211> 247
<212> PRT
<213> Homo sapiens

<400> 2422

Met Leu Leu Leu Pro Leu Pro Leu Leu Phe Leu Leu Cys Ser Arg
1   5   10   15

Ala Glu Ala Gly Glu Ile Ile Gly Gly Thr Glu Cys Lys Pro His Ser
                20   25   30

Arg Pro Tyr Met Ala Tyr Leu Glu Ile Val Thr Ser Asn Gly Pro Ser
            35   40   45

Lys Phe Cys Gly Gly Phe Leu Ile Arg Arg Asn Phe Val Leu Thr Ala
            50   55   60

```
Ala His Cys Ala Gly Arg Ser Ile Thr Val Thr Leu Gly Ala His Asn
65                  70              75                  80


Ile Thr Glu Glu Glu Asp Thr Trp Gln Lys Leu Glu Val Ile Lys Gln
                85                  90              95


Phe Arg His Pro Lys Tyr Asn Thr Ser Thr Leu His His Asp Ile Met
            100             105             110


Leu Leu Lys Leu Lys Glu Lys Ala Ser Leu Thr Leu Ala Val Gly Thr
        115             120             125


Leu Pro Phe Pro Ser Gln Phe Asn Phe Val Pro Pro Gly Arg Met Cys
    130             135             140


Arg Val Ala Gly Trp Gly Arg Thr Gly Val Leu Lys Pro Gly Ser Asp
145             150             155             160


Thr Leu Gln Glu Val Lys Leu Arg Leu Met Asp Pro Gln Ala Cys Ser
            165             170             175


His Phe Arg Asp Phe Asp His Asn Leu Gln Leu Cys Val Gly Asn Pro
        180             185             190


Arg Lys Thr Lys Ser Ala Phe Lys Gly Asp Ser Gly Gly Pro Leu Leu
        195             200             205


Cys Ala Gly Val Ala Gln Gly Ile Val Ser Tyr Gly Arg Ser Asp Ala
    210             215             220


Lys Pro Pro Ala Val Phe Thr Arg Ile Ser His Tyr Arg Pro Trp Ile
225             230             235             240


Asn Gln Ile Leu Gln Ala Asn
            245


<210>   2423
<211>   976
<212>   PRT
<213>   Homo sapiens

<400>   2423

Met Arg Gly Ala Arg Gly Ala Trp Asp Phe Leu Cys Val Leu Leu Leu
1               5               10              15


Leu Leu Arg Val Gln Thr Gly Ser Ser Gln Pro Ser Val Ser Pro Gly
```

                    20   25   30

Glu Pro Ser Pro Pro Ser Ile His Pro Gly Lys Ser Asp Leu Ile Val
         35   40   45

Arg Val Gly Asp Glu Ile Arg Leu Leu Cys Thr Asp Pro Gly Phe Val
     50   55   60

Lys Trp Thr Phe Glu Ile Leu Asp Glu Thr Asn Glu Asn Lys Gln Asn
65   70   75   80

Glu Trp Ile Thr Glu Lys Ala Glu Ala Thr Asn Thr Gly Lys Tyr Thr
                    85   90   95

Cys Thr Asn Lys His Gly Leu Ser Asn Ser Ile Tyr Val Phe Val Arg
              100   105   110

Asp Pro Ala Lys Leu Phe Leu Val Asp Arg Ser Leu Tyr Gly Lys Glu
         115   120   125

Asp Asn Asp Thr Leu Val Arg Cys Pro Leu Thr Asp Pro Glu Val Thr
     130   135   140

Asn Tyr Ser Leu Lys Gly Cys Gln Gly Lys Pro Leu Pro Lys Asp Leu
145   150   155   160

Arg Phe Ile Pro Asp Pro Lys Ala Gly Ile Met Ile Lys Ser Val Lys
              165   170   175

Arg Ala Tyr His Arg Leu Cys Leu His Cys Ser Val Asp Gln Glu Gly
              180   185   190

Lys Ser Val Leu Ser Glu Lys Phe Ile Leu Lys Val Arg Pro Ala Phe
         195   200   205

Lys Ala Val Pro Val Val Ser Val Ser Lys Ala Ser Tyr Leu Leu Arg
     210   215   220

Glu Gly Glu Glu Phe Thr Val Thr Cys Thr Ile Lys Asp Val Ser Ser
225   230   235   240

Ser Val Tyr Ser Thr Trp Lys Arg Glu Asn Ser Gln Thr Lys Leu Gln
              245   250   255

Glu Lys Tyr Asn Ser Trp His His Gly Asp Phe Asn Tyr Glu Arg Gln
              260   265   270

Ala Thr Leu Thr Ile Ser Ser Ala Arg Val Asn Asp Ser Gly Val Phe
          275   280   285

Met Cys Tyr Ala Asn Asn Thr Phe Gly Ser Ala Asn Val Thr Thr Thr
    290   295   300

Leu Glu Val Val Asp Lys Gly Phe Ile Asn Ile Phe Pro Met Ile Asn
305   310   315   320

Thr Thr Val Phe Val Asn Asp Gly Glu Asn Val Asp Leu Ile Val Glu
              325   330   335

Tyr Glu Ala Phe Pro Lys Pro Glu His Gln Gln Trp Ile Tyr Met Asn
          340   345   350

Arg Thr Phe Thr Asp Lys Trp Glu Asp Tyr Pro Lys Ser Glu Asn Glu
          355   360   365

Ser Asn Ile Arg Tyr Val Ser Glu Leu His Leu Thr Arg Leu Lys Gly
    370   375   380

Thr Glu Gly Gly Thr Tyr Thr Phe Leu Val Ser Asn Ser Asp Val Asn
385   390   395   400

Ala Ala Ile Ala Phe Asn Val Tyr Val Asn Thr Lys Pro Glu Ile Leu
              405   410   415

Thr Tyr Asp Arg Leu Val Asn Gly Met Leu Gln Cys Val Ala Ala Gly
          420   425   430

Phe Pro Glu Pro Thr Ile Asp Trp Tyr Phe Cys Pro Gly Thr Glu Gln
          435   440   445

Arg Cys Ser Ala Ser Val Leu Pro Val Asp Val Gln Thr Leu Asn Ser
    450   455   460

Ser Gly Pro Pro Phe Gly Lys Leu Val Val Gln Ser Ser Ile Asp Ser
465   470   475   480

Ser Ala Phe Lys His Asn Gly Thr Val Glu Cys Lys Ala Tyr Asn Asp
              485   490   495

Val Gly Lys Thr Ser Ala Tyr Phe Asn Phe Ala Phe Lys Gly Asn Asn
          500   505   510

721

Lys Glu Gln Ile His Pro His Thr Leu Phe Thr Pro Leu Leu Ile Gly
        515   520   525

Phe Val Ile Val Ala Gly Met Met Cys Ile Ile Val Met Ile Leu Thr
545   550   555   560

Tyr Lys Tyr Leu Gln Lys Pro Met Tyr Glu Val Gln Trp Lys Val Val
545   550   555   560

Glu Glu Ile Asn Gly Asn Asn Tyr Val Tyr Ile Asp Pro Thr Gln Leu
                565   570   575

Pro Tyr Asp His Lys Trp Glu Phe Pro Arg Asn Arg Leu Ser Phe Gly
            580   585   590

Lys Thr Leu Gly Ala Gly Ala Phe Gly Lys Val Val Glu Ala Thr Ala
        595   600   605

Tyr Gly Leu Ile Lys Ser Asp Ala Ala Met Thr Val Ala Val Lys Met
    610   615   620

Leu Lys Pro Ser Ala His Leu Thr Glu Arg Glu Ala Leu Met Ser Glu
625   630   635   640

Leu Lys Val Leu Ser Tyr Leu Gly Asn His Met Asn Ile Val Asn Leu
                645   650   655

Leu Gly Ala Cys Thr Ile Gly Gly Pro Thr Leu Val Ile Thr Glu Tyr
            660   665   670

Cys Cys Tyr Gly Asp Leu Leu Asn Phe Leu Arg Arg Lys Arg Asp Ser
        675   680   685

Phe Ile Cys Ser Lys Gln Glu Asp His Ala Glu Ala Ala Leu Tyr Lys
    690   695   700

Asn Leu Leu His Ser Lys Glu Ser Ser Cys Ser Asp Ser Thr Asn Glu
705   710   715   720

Tyr Met Asp Met Lys Pro Gly Val Ser Tyr Val Val Pro Thr Lys Ala
            725   730   735

Asp Lys Arg Arg Ser Val Arg Ile Gly Ser Tyr Ile Glu Arg Asp Val
        740   745   750

722

```
Thr Pro Ala Ile Met Glu Asp Asp Glu Leu Ala Leu Asp Leu Glu Asp
        755                 760                 765

Leu Leu Ser Phe Ser Tyr Gln Val Ala Lys Gly Met Ala Phe Leu Ala
    770                 775                 780

Ser Lys Asn Cys Ile His Arg Asp Leu Ala Ala Arg Asn Ile Leu Leu
785                 790                 795                 800

Thr His Gly Arg Ile Thr Lys Ile Cys Asp Phe Gly Leu Ala Arg Asp
                805                 810                 815

Ile Lys Asn Asp Ser Asn Tyr Val Val Lys Gly Asn Ala Arg Leu Pro
            820                 825                 830

Val Lys Trp Met Ala Pro Glu Ser Ile Phe Asn Cys Val Tyr Thr Phe
        835                 840                 845

Glu Ser Asp Val Trp Ser Tyr Gly Ile Phe Leu Trp Glu Leu Phe Ser
    850                 855                 860

Leu Gly Ser Ser Pro Tyr Pro Gly Met Pro Val Asp Ser Lys Phe Tyr
865                 870                 875                 880

Lys Met Ile Lys Glu Gly Phe Arg Met Leu Ser Pro Glu His Ala Pro
                885                 890                 895

Ala Glu Met Tyr Asp Ile Met Lys Thr Cys Trp Asp Ala Asp Pro Leu
            900                 905                 910

Lys Arg Pro Thr Phe Lys Gln Ile Val Gln Leu Ile Glu Lys Gln Ile
        915                 920                 925

Ser Glu Ser Thr Asn His Ile Tyr Ser Asn Leu Ala Asn Cys Ser Pro
    930                 935                 940

Asn Arg Gln Lys Pro Val Val Asp His Ser Val Arg Ile Asn Ser Val
945                 950                 955                 960

Gly Ser Thr Ala Ser Ser Ser Gln Pro Leu Leu Val His Asp Asp Val
                965                 970                 975
```

```
<210>  2424
<211>  635
<212>  PRT
<213>  Homo sapiens
```

<400> 2424

```
Met Pro Ser Trp Ala Leu Phe Met Val Thr Ser Cys Leu Leu Leu Ala
1               5                   10                  15

Pro Gln Asn Leu Ala Gln Val Ser Ser Gln Asp Val Ser Leu Leu Ala
            20                  25                  30

Ser Asp Ser Glu Pro Leu Lys Cys Phe Ser Arg Thr Phe Glu Asp Leu
        35                  40                  45

Thr Cys Phe Trp Asp Glu Glu Glu Ala Ala Pro Ser Gly Thr Tyr Gln
    50                  55                  60

Leu Leu Tyr Ala Tyr Pro Arg Glu Lys Pro Arg Ala Cys Pro Leu Ser
65                  70                  75                  80

Ser Gln Ser Met Pro His Phe Gly Thr Arg Tyr Val Cys Gln Phe Pro
                85                  90                  95

Asp Gln Glu Glu Val Arg Leu Phe Phe Pro Leu His Leu Trp Val Lys
            100                 105                 110

Asn Val Phe Leu Asn Gln Thr Arg Thr Gln Arg Val Leu Phe Val Asp
            115                 120                 125

Ser Val Gly Leu Pro Ala Pro Pro Ser Ile Ile Lys Ala Met Gly Gly
    130                 135                 140

Ser Gln Pro Gly Glu Leu Gln Ile Ser Trp Glu Glu Pro Ala Pro Glu
145                 150                 155                 160

Ile Ser Asp Phe Leu Arg Tyr Glu Leu Arg Tyr Gly Pro Arg Asp Pro
                165                 170                 175

Lys Asn Ser Thr Gly Pro Thr Val Ile Gln Leu Ile Ala Thr Glu Thr
            180                 185                 190

Cys Cys Pro Ala Leu Gln Arg Pro His Ser Ala Ser Ala Leu Asp Gln
            195                 200                 205

Ser Pro Cys Ala Gln Pro Thr Met Pro Trp Gln Asp Gly Pro Lys Gln
    210                 215                 220

Thr Ser Pro Ser Arg Glu Ala Ser Ala Leu Thr Ala Glu Gly Gly Ser
225                 230                 235                 240
```

Cys Leu Ile Ser Gly Leu Gln Pro Gly Asn Ser Tyr Trp Leu Gln Leu
              245   250   255

Arg Ser Glu Pro Asp Gly Ile Ser Leu Gly Gly Ser Trp Gly Ser Trp
              260   265   270

Ser Leu Pro Val Thr Val Asp Leu Pro Gly Asp Ala Val Ala Leu Gly
              275   280   285

Leu Gln Cys Phe Thr Leu Asp Leu Lys Asn Val Thr Cys Gln Trp Gln
    290   295   300

Gln Gln Asp His Ala Ser Ser Gln Gly Phe Phe Tyr His Ser Arg Ala
305   310   315   320

Arg Cys Cys Pro Arg Asp Arg Tyr Pro Ile Trp Glu Asn Cys Glu Glu
              325   330   335

Glu Glu Lys Thr Asn Pro Gly Leu Gln Thr Pro Gln Phe Ser Arg Cys
              340   345   350

His Phe Lys Ser Arg Asn Asp Ser Ile Ile His Ile Leu Val Glu Val
              355   360   365

Thr Thr Ala Pro Gly Thr Val His Ser Tyr Leu Gly Ser Pro Phe Trp
    370   375   380

Ile His Gln Ala Val Arg Leu Pro Thr Pro Asn Leu His Trp Arg Glu
385   390   395   400

Ile Ser Ser Gly His Leu Glu Leu Glu Trp Gln His Pro Ser Ser Trp
              405   410   415

Ala Ala Gln Glu Thr Cys Tyr Gln Leu Arg Tyr Thr Gly Glu Gly His
              420   425   430

Gln Asp Trp Lys Val Leu Glu Pro Pro Leu Gly Ala Arg Gly Gly Thr
    435   440   445

Leu Glu Leu Arg Pro Arg Ser Arg Tyr Arg Leu Gln Leu Arg Ala Arg
    450   455   460

Leu Asn Gly Pro Thr Tyr Gln Gly Pro Trp Ser Ser Trp Ser Asp Pro
465   470   475   480

Thr Arg Val Glu Thr Ala Thr Glu Thr Ala Trp Ile Ser Leu Val Thr
              485   490   495

Ala Leu His Leu Val Leu Gly Leu Ser Ala Val Leu Gly Leu Leu Leu
              500   505   510

Leu Arg Trp Gln Phe Pro Ala His Tyr Arg Arg Leu Arg His Ala Leu
              515   520   525

Trp Pro Ser Leu Pro Asp Leu His Arg Val Leu Gly Gln Tyr Leu Arg
         530   535   540

Asp Thr Ala Ala Leu Ser Pro Pro Lys Ala Thr Val Ser Asp Thr Cys
545   550   555   560

Glu Glu Val Glu Pro Ser Leu Leu Glu Ile Leu Pro Lys Ser Ser Glu
              565   570   575

Arg Thr Pro Leu Pro Leu Cys Ser Ser Gln Ala Gln Met Asp Tyr Arg
         580   585   590

Arg Leu Gln Pro Ser Cys Leu Gly Thr Met Pro Leu Ser Val Cys Pro
         595   600   605

Pro Met Ala Glu Ser Gly Ser Cys Cys Thr Thr His Ile Ala Asn His
    610   615   620

Ser Tyr Leu Pro Leu Ser Tyr Trp Gln Gln Pro
625   630   635

<210> 2425
<211> 1006
<212> PRT
<213> Homo sapiens

<400> 2425

Met Val Cys Ser Leu Trp Val Leu Leu Val Ser Ser Val Leu Ala
1   5   10   15

Leu Glu Glu Val Leu Leu Asp Thr Thr Gly Glu Thr Ser Glu Ile Gly
         20   25   30

Trp Leu Thr Tyr Pro Pro Gly Gly Trp Asp Glu Val Ser Val Leu Asp
         35   40   45

Asp Gln Arg Arg Leu Thr Arg Thr Phe Glu Ala Cys His Val Ala Gly
    50   55   60

```
Ala Pro Pro Gly Thr Gly Gln Asp Asn Trp Leu Gln Thr His Phe Val
65                70                75                80

Glu Arg Arg Gly Ala Gln Arg Ala His Ile Arg Leu His Phe Ser Val
                85                90                95

Arg Ala Cys Ser Ser Leu Gly Val Ser Gly Gly Thr Cys Arg Glu Thr
            100               105               110

Phe Thr Leu Tyr Tyr Arg Gln Ala Glu Glu Pro Asp Ser Pro Asp Ser
        115               120               125

Val Ser Ser Trp His Leu Lys Arg Trp Thr Lys Val Asp Thr Ile Ala
    130               135               140

Ala Asp Glu Ser Phe Pro Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser
145               150               155               160

Ser Ala Ala Trp Ala Val Gly Pro His Gly Ala Gly Gln Arg Ala Gly
            165               170               175

Leu Gln Leu Asn Val Lys Glu Arg Ser Phe Gly Pro Leu Thr Gln Arg
        180               185               190

Gly Phe Tyr Val Ala Phe Gln Asp Thr Gly Ala Cys Leu Ala Leu Val
        195               200               205

Ala Val Arg Leu Phe Ser Tyr Thr Cys Pro Ala Val Leu Arg Ser Phe
    210               215               220

Ala Ser Phe Pro Glu Thr Gln Ala Ser Gly Ala Gly Gly Ala Ser Leu
225               230               235               240

Val Ala Ala Val Gly Thr Cys Val Ala His Ala Glu Pro Glu Glu Asp
            245               250               255

Gly Val Gly Gly Gln Ala Gly Ser Pro Pro Arg Leu His Cys Asn
            260               265               270

Gly Glu Gly Lys Trp Met Val Ala Val Gly Gly Cys Arg Cys Gln Pro
        275               280               285

Gly Tyr Gln Pro Ala Arg Gly Asp Lys Ala Cys Gln Ala Cys Pro Arg
    290               295               300
```

```
Gly Leu Tyr Lys Ser Ser Ala Gly Asn Ala Pro Cys Ser Pro Cys Pro
305                 310                 315                 320


Ala Arg Ser His Ala Pro Asn Pro Ala Ala Pro Val Cys Pro Cys Leu
                325                 330                 335


Glu Gly Phe Tyr Arg Ala Ser Ser Asp Pro Pro Glu Ala Pro Cys Thr
            340                 345                 350


Gly Pro Pro Ser Ala Pro Gln Glu Leu Trp Phe Glu Val Gln Gly Ser
            355                 360                 365


Ala Leu Met Leu His Trp Arg Leu Pro Arg Glu Leu Gly Gly Arg Gly
    370                 375                 380


Asp Leu Leu Phe Asn Val Val Cys Lys Glu Cys Glu Gly Arg Gln Glu
385                 390                 395                 400


Pro Ala Ser Gly Gly Gly Gly Thr Cys His Arg Cys Arg Asp Glu Val
            405                 410                 415


His Phe Asp Pro Arg Gln Arg Gly Leu Thr Glu Ser Arg Val Leu Val
            420                 425                 430


Gly Gly Leu Arg Ala His Val Pro Tyr Ile Leu Glu Val Gln Ala Val
            435                 440                 445


Asn Gly Val Ser Glu Leu Ser Pro Asp Pro Pro Gln Ala Ala Ala Ile
  450                 455                 460


Asn Val Ser Thr Ser His Glu Val Pro Ser Ala Val Pro Val Val His
465                 470                 475                 480


Gln Val Ser Arg Ala Ser Asn Ser Ile Thr Val Ser Trp Pro Gln Pro
            485                 490                 495


Asp Gln Thr Asn Gly Asn Ile Leu Asp Tyr Gln Leu Arg Tyr Tyr Asp
            500                 505                 510


Gln Ala Glu Asp Glu Ser His Ser Phe Thr Leu Thr Ser Glu Thr Asn
    515                 520                 525


Thr Ala Thr Val Thr Gln Leu Ser Pro Gly His Ile Tyr Gly Phe Gln
    530                 535                 540
```

Val Arg Ala Arg Thr Ala Ala Gly His Gly Pro Tyr Gly Gly Lys Val
545   550   555   560

Tyr Phe Gln Thr Leu Pro Gln Gly Glu Leu Ser Ser Gln Leu Pro Glu
               565   570   575

Arg Leu Ser Leu Val Ile Gly Ser Ile Leu Gly Ala Leu Ala Phe Leu
          580   585   590

Leu Leu Ala Ala Ile Thr Val Leu Ala Val Val Phe Gln Arg Lys Arg
          595   600   605

Arg Gly Thr Gly Tyr Thr Glu Gln Leu Gln Gln Tyr Ser Ser Pro Gly
     610   615   620

Leu Gly Val Lys Tyr Tyr Ile Asp Pro Ser Thr Tyr Glu Asp Pro Cys
625   630   635   640

Gln Ala Ile Arg Glu Leu Ala Arg Glu Val Asp Pro Ala Tyr Ile Lys
               645   650   655

Ile Glu Glu Val Ile Gly Thr Gly Ser Phe Gly Glu Val Arg Gln Gly
               660   665   670

Arg Leu Gln Pro Arg Gly Arg Arg Glu Gln Thr Val Ala Ile Gln Ala
          675   680   685

Leu Trp Ala Gly Gly Ala Glu Ser Leu Gln Met Thr Phe Leu Gly Arg
     690   695   700

Ala Ala Val Leu Gly Gln Phe Gln His Pro Asn Ile Leu Arg Leu Glu
705   710   715   720

Gly Val Val Thr Lys Ser Arg Pro Leu Met Val Leu Thr Glu Phe Met
               725   730   735

Glu Leu Gly Pro Leu Asp Ser Phe Leu Arg Gln Arg Glu Gly Gln Phe
          740   745   750

Ser Ser Leu Gln Leu Val Ala Met Gln Arg Gly Val Ala Ala Ala Met
          755   760   765

Gln Tyr Leu Ser Ser Phe Ala Phe Val His Arg Ser Leu Ser Ala His
     770   775   780

Ser Val Leu Val Asn Ser His Leu Val Cys Lys Val Ala Arg Leu Gly

```
785                    790                     795                    800
```

His Ser Pro Gln Gly Pro Ser Cys Leu Leu Arg Trp Ala Ala Pro Glu
                    805   810   815

Val Ile Ala His Gly Lys His Thr Thr Ser Ser Asp Val Trp Ser Phe
                820   825   830

Gly Ile Leu Met Trp Glu Val Met Ser Tyr Gly Glu Arg Pro Tyr Trp
            835   840   845

Asp Met Ser Glu Gln Glu Val Leu Asn Ala Ile Glu Gln Glu Phe Arg
        850   855   860

Leu Pro Pro Pro Pro Gly Cys Pro Pro Gly Leu His Leu Leu Met Leu
865   870   875   880

Asp Thr Trp Gln Lys Asp Arg Ala Arg Arg Pro His Phe Asp Gln Leu
                885   890   895

Val Ala Ala Phe Asp Lys Met Ile Arg Lys Pro Asp Thr Leu Gln Ala
            900   905   910

Gly Gly Asp Pro Gly Glu Arg Pro Ser Gln Ala Leu Leu Thr Pro Val
        915   920   925

Ala Leu Asp Phe Pro Cys Leu Asp Ser Pro Gln Ala Trp Leu Ser Ala
    930   935   940

Ile Gly Leu Glu Cys Tyr Gln Asp Asn Phe Ser Lys Phe Gly Leu Cys
945   950   955   960

Thr Phe Ser Asp Val Ala Gln Leu Ser Leu Glu Asp Leu Pro Ala Leu
                965   970   975

Gly Ile Thr Leu Ala Gly His Gln Lys Lys Leu Leu His His Ile Gln
            980   985   990

Leu Leu Gln Gln His Leu Arg Gln   Gln Gly Ser Val Glu   Val
        995   1000   1005

<210> 2426
<211> 508
<212> PRT
<213> Homo sapiens

<400> 2426
```

```
Met Asp His Leu Gly Ala Ser Leu Trp Pro Gln Val Gly Ser Leu Cys
1               5                   10                  15

Leu Leu Leu Ala Gly Ala Ala Trp Ala Pro Pro Asn Leu Pro Asp
            20              25              30

Pro Lys Phe Glu Ser Lys Ala Ala Leu Leu Ala Ala Arg Gly Pro Glu
        35              40                  45

Glu Leu Leu Cys Phe Thr Glu Arg Leu Glu Asp Leu Val Cys Phe Trp
    50              55                  60

Glu Glu Ala Ala Ser Ala Gly Val Gly Pro Gly Asn Tyr Ser Phe Ser
65              70                  75                  80

Tyr Gln Leu Glu Asp Glu Pro Trp Lys Leu Cys Arg Leu His Gln Ala
            85                  90                  95

Pro Thr Ala Arg Gly Ala Val Arg Phe Trp Cys Ser Leu Pro Thr Ala
            100             105                 110

Asp Thr Ser Ser Phe Val Pro Leu Glu Leu Arg Val Thr Ala Ala Ser
        115             120                 125

Gly Ala Pro Arg Tyr His Arg Val Ile His Ile Asn Glu Val Val Leu
        130             135                 140

Leu Asp Ala Pro Val Gly Leu Val Ala Arg Leu Ala Asp Glu Ser Gly
145             150                 155                 160

His Val Val Leu Arg Trp Leu Pro Pro Glu Thr Pro Met Thr Ser
            165                 170                 175

His Ile Arg Tyr Glu Val Asp Val Ser Ala Gly Asn Gly Ala Gly Ser
            180                 185                 190

Val Gln Arg Val Glu Ile Leu Glu Gly Arg Thr Glu Cys Val Leu Ser
        195                 200                 205

Asn Leu Arg Gly Arg Thr Arg Tyr Thr Phe Ala Val Arg Ala Arg Met
    210                 215                 220

Ala Glu Pro Ser Phe Gly Gly Phe Trp Ser Ala Trp Ser Glu Pro Val
225             230                 235                 240
```

Ser Leu Leu Thr Pro Ser Asp Leu Asp Pro Leu Ile Leu Thr Leu Ser
                    245   250   255

Leu Ile Leu Val Val Ile Leu Val Leu Leu Thr Val Leu Ala Leu Leu
                260   265   270

Ser His Arg Arg Ala Leu Lys Gln Lys Ile Trp Pro Gly Ile Pro Ser
            275   280   285

Pro Glu Ser Glu Phe Glu Gly Leu Phe Thr Thr His Lys Gly Asn Phe
        290   295   300

Gln Leu Trp Leu Tyr Gln Asn Asp Gly Cys Leu Trp Trp Ser Pro Cys
305   310   315   320

Thr Pro Phe Thr Glu Asp Pro Pro Ala Ser Leu Glu Val Leu Ser Glu
                325   330   335

Arg Cys Trp Gly Thr Met Gln Ala Val Glu Pro Gly Thr Asp Asp Glu
                340   345   350

Gly Pro Leu Leu Glu Pro Val Gly Ser Glu His Ala Gln Asp Thr Tyr
            355   360   365

Leu Val Leu Asp Lys Trp Leu Leu Pro Arg Asn Pro Pro Ser Glu Asp
        370   375   380

Leu Pro Gly Pro Gly Gly Ser Val Asp Ile Val Ala Met Asp Glu Gly
385   390   395   400

Ser Glu Ala Ser Ser Cys Ser Ser Ala Leu Ala Ser Lys Pro Ser Pro
                405   410   415

Glu Gly Ala Ser Ala Ala Ser Phe Glu Tyr Thr Ile Leu Asp Pro Ser
            420   425   430

Ser Gln Leu Leu Arg Pro Trp Thr Leu Cys Pro Glu Leu Pro Pro Thr
            435   440   445

Pro Pro His Leu Lys Tyr Leu Tyr Leu Val Val Ser Asp Ser Gly Ile
        450   455   460

Ser Thr Asp Tyr Ser Ser Gly Asp Ser Gln Gly Ala Gln Gly Gly Leu
465   470   475   480

Ser Asp Gly Pro Tyr Ser Asn Pro Tyr Glu Asn Ser Leu Ile Pro Ala

```
                      485                      490                    495
```

```
Ala Glu Pro Leu Pro Pro Ser Tyr Val Ala Cys Ser
              500                      505
```

```
<210>  2427
<211>  441
<212>  PRT
<213>  Homo sapiens

<400>  2427
```

```
Met Ser Pro Ile Ser Gly Ala Ser Pro Ser Trp Arg Ala Ala Pro Lys
1               5                   10                  15
```

```
Ala Ser Asp Leu Leu Gly Ala Arg Gly Pro Gly Gly Thr Phe Gln Gly
            20                  25                  30
```

```
Arg Asp Leu Arg Gly Gly Ala His Ala Ser Ser Ser Leu Asn Pro
        35                  40                  45
```

```
Met Pro Pro Ser Gln Leu Gln Leu Ser Thr Val Asp Ala His Ala Arg
    50                  55                  60
```

```
Thr Pro Val Leu Gln Val His Pro Leu Glu Ser Pro Ala Met Ile Ser
65                  70                  75                  80
```

```
Leu Thr Pro Pro Thr Thr Ala Thr Gly Val Phe Ser Leu Lys Ala Arg
            85                  90                  95
```

```
Pro Gly Leu Pro Pro Gly Ile Asn Val Ala Ser Leu Glu Trp Val Ser
            100                 105                 110
```

```
Arg Glu Pro Ala Leu Leu Cys Thr Phe Pro Asn Pro Ser Ala Pro Arg
        115                 120                 125
```

```
Lys Asp Ser Thr Leu Ser Ala Val Pro Gln Ser Ser Tyr Pro Leu Leu
    130                 135                 140
```

```
Ala Asn Gly Val Cys Lys Trp Pro Gly Cys Glu Lys Val Phe Glu Glu
145                 150                 155                 160
```

```
Pro Glu Asp Phe Leu Lys His Cys Gln Ala Asp His Leu Leu Asp Glu
            165                 170                 175
```

```
Lys Gly Arg Ala Gln Cys Leu Leu Gln Arg Glu Met Val Gln Ser Leu
            180                 185                 190
```

```
Glu Gln Gln Leu Val Leu Glu Lys Glu Lys Leu Ser Ala Met Gln Ala
         195             200             205

His Leu Ala Gly Lys Met Ala Leu Thr Lys Ala Ser Ser Val Ala Ser
    210             215             220

Ser Asp Lys Gly Ser Cys Cys Ile Val Ala Ala Gly Ser Gln Gly Pro
225             230             235             240

Val Val Pro Ala Trp Ser Gly Pro Arg Glu Ala Pro Asp Ser Leu Phe
            245             250             255

Ala Val Arg Arg His Leu Trp Gly Ser His Gly Asn Ser Thr Phe Pro
        260             265             270

Glu Phe Leu His Asn Met Asp Tyr Phe Lys Phe His Asn Met Arg Pro
    275             280             285

Pro Phe Thr Tyr Ala Thr Leu Ile Arg Trp Ala Ile Leu Glu Ala Pro
    290             295             300

Glu Lys Gln Arg Thr Leu Asn Glu Ile Tyr His Trp Phe Thr Arg Met
305             310             315             320

Phe Ala Phe Phe Arg Asn His Pro Ala Thr Trp Lys Val Ser Ser Ser
        325             330             335

Glu Val Ala Val Thr Gly Met Ala Ser Ser Ala Ile Ala Ala Gln Ser
        340             345             350

Gly Gln Ala Trp Val Trp Ala His Arg His Ile Gly Glu Glu Arg Asp
    355             360             365

Val Gly Cys Trp Trp Trp Leu Leu Ala Ser Glu Val Asp Ala His Leu
    370             375             380

Leu Pro Val Pro Gly Leu Pro Gln Asn Ala Ile Arg His Asn Leu Ser
385             390             395             400

Leu His Lys Cys Phe Val Arg Val Glu Ser Glu Lys Gly Ala Val Trp
        405             410             415

Thr Val Asp Glu Leu Glu Phe Arg Lys Lys Arg Ser Gln Arg Pro Ser
    420             425             430
```

```
Arg Cys Ser Asn Pro Thr Pro Gly Pro
        435                 440


<210>  2428
<211>  413
<212>  PRT
<213>  Homo sapiens

<400>  2428

Met Glu Phe Pro Gly Leu Gly Ser Leu Gly Thr Ser Glu Pro Leu Pro
1               5                   10                  15


Gln Phe Val Asp Pro Ala Leu Val Ser Ser Thr Pro Glu Ser Gly Val
            20                  25                  30


Phe Phe Pro Ser Gly Pro Glu Gly Leu Asp Ala Ala Ala Ser Ser Thr
        35                  40                  45


Ala Pro Ser Thr Ala Thr Ala Ala Ala Ala Leu Ala Tyr Tyr Arg
    50                  55                  60


Asp Ala Glu Ala Tyr Arg His Ser Pro Val Phe Gln Val Tyr Pro Leu
65                  70                  75                  80


Leu Asn Cys Met Glu Gly Ile Pro Gly Gly Ser Pro Tyr Ala Gly Trp
            85                  90                  95


Ala Tyr Gly Lys Thr Gly Leu Tyr Pro Ala Ser Thr Val Cys Pro Thr
            100                 105                 110


Arg Glu Asp Ser Pro Pro Gln Ala Val Glu Asp Leu Asp Gly Lys Gly
            115                 120                 125


Ser Thr Ser Phe Leu Glu Thr Leu Lys Thr Glu Arg Leu Ser Pro Asp
    130                 135                 140


Leu Leu Thr Leu Gly Pro Ala Leu Pro Ser Ser Leu Pro Val Pro Asn
145                 150                 155                 160


Ser Ala Tyr Gly Gly Pro Asp Phe Ser Ser Thr Phe Phe Ser Pro Thr
            165                 170                 175


Gly Ser Pro Leu Asn Ser Ala Ala Tyr Ser Ser Pro Lys Leu Arg Gly
            180                 185                 190


Thr Leu Pro Leu Pro Pro Cys Glu Ala Arg Glu Cys Val Asn Cys Gly
    195                 200                 205
```

```
Ala Thr Ala Thr Pro Leu Trp Arg Arg Asp Arg Thr Gly His Tyr Leu
    210                 215                 220

Cys Asn Ala Cys Gly Leu Tyr His Lys Met Asn Gly Gln Asn Arg Pro
225                 230                 235                 240

Leu Ile Arg Pro Lys Lys Arg Leu Ile Val Ser Lys Arg Ala Gly Thr
                245                 250                 255

Gln Cys Thr Asn Cys Gln Thr Thr Thr Thr Leu Trp Arg Arg Asn
                260                 265                 270

Ala Ser Gly Asp Pro Val Cys Asn Ala Cys Gly Leu Tyr Tyr Lys Leu
            275                 280                 285

His Gln Val Asn Arg Pro Leu Thr Met Arg Lys Asp Gly Ile Gln Thr
    290                 295                 300

Arg Asn Arg Lys Ala Ser Gly Lys Gly Lys Lys Lys Arg Gly Ser Ser
305                 310                 315                 320

Leu Gly Gly Thr Gly Ala Ala Glu Gly Pro Ala Gly Gly Phe Met Val
                325                 330                 335

Val Ala Gly Gly Ser Gly Ser Gly Asn Cys Gly Glu Val Ala Ser Gly
            340                 345                 350

Leu Thr Leu Gly Pro Pro Gly Thr Ala His Leu Tyr Gln Gly Leu Gly
            355                 360                 365

Pro Val Val Leu Ser Gly Pro Val Ser His Leu Met Pro Phe Pro Gly
    370                 375                 380

Pro Leu Leu Gly Ser Pro Thr Gly Ser Phe Pro Thr Gly Pro Met Pro
385                 390                 395                 400

Pro Thr Thr Ser Thr Thr Val Val Ala Pro Leu Ser Ser
                405                 410

<210>  2429
<211>  1039
<212>  PRT
<213>  Homo sapiens

<400>  2429
```

```
Met Ala Arg Ala Leu Cys Pro Leu Gln Ala Leu Trp Leu Leu Glu Trp
1                   5                   10                  15


Val Leu Leu Leu Leu Gly Pro Cys Ala Ala Pro Pro Ala Trp Ala Leu
                20                  25                  30


Asn Leu Asp Pro Val Gln Leu Thr Phe Tyr Ala Gly Pro Asn Gly Ser
            35                  40                  45


Gln Phe Gly Phe Ser Leu Asp Phe His Lys Asp Ser His Gly Arg Val
        50                  55                  60


Ala Ile Val Val Gly Ala Pro Arg Thr Leu Gly Pro Ser Gln Glu Glu
65                  70                  75                  80


Thr Gly Gly Val Phe Leu Cys Pro Trp Arg Ala Glu Gly Gly Gln Cys
                85                  90                  95


Pro Ser Leu Leu Phe Asp Leu Arg Asp Glu Thr Arg Asn Val Gly Ser
            100                 105                 110


Gln Thr Leu Gln Thr Phe Lys Ala Arg Gln Gly Leu Gly Ala Ser Val
        115                 120                 125


Val Ser Trp Ser Asp Val Ile Val Ala Cys Ala Pro Trp Gln His Trp
    130                 135                 140


Asn Val Leu Glu Lys Thr Glu Glu Ala Glu Lys Thr Pro Val Gly Ser
145                 150                 155                 160


Cys Phe Leu Ala Gln Pro Glu Ser Gly Arg Arg Ala Glu Tyr Ser Pro
            165                 170                 175


Cys Arg Gly Asn Thr Leu Ser Arg Ile Tyr Val Glu Asn Asp Phe Ser
            180                 185                 190


Trp Asp Lys Arg Tyr Cys Glu Ala Gly Phe Ser Ser Val Val Thr Gln
        195                 200                 205


Ala Gly Glu Leu Val Leu Gly Ala Pro Gly Gly Tyr Tyr Phe Leu Gly
    210                 215                 220


Leu Leu Ala Gln Ala Pro Val Ala Asp Ile Phe Ser Ser Tyr Arg Pro
225                 230                 235                 240


Gly Ile Leu Leu Trp His Val Ser Ser Gln Ser Leu Ser Phe Asp Ser
```

```
                245                    250                     255
```

Ser Asn Pro Glu Tyr Phe Asp Gly Tyr Trp Gly Tyr Ser Val Ala Val
            260   265   270

Gly Glu Phe Asp Gly Asp Leu Asn Thr Thr Glu Tyr Val Val Gly Ala
            275   280   285

Pro Thr Trp Ser Trp Thr Leu Gly Ala Val Glu Ile Leu Asp Ser Tyr
    290   295   300

Tyr Gln Arg Leu His Arg Leu Arg Ala Glu Gln Met Ala Ser Tyr Phe
305   310   315   320

Gly His Ser Val Ala Val Thr Asp Val Asn Gly Asp Gly Arg His Asp
            325   330   335

Leu Leu Val Gly Ala Pro Leu Tyr Met Glu Ser Arg Ala Asp Arg Lys
            340   345   350

Leu Ala Glu Val Gly Arg Val Tyr Leu Phe Leu Gln Pro Arg Gly Pro
            355   360   365

His Ala Leu Gly Ala Pro Ser Leu Leu Leu Thr Gly Thr Gln Leu Tyr
    370   375   380

Gly Arg Phe Gly Ser Ala Ile Ala Pro Leu Gly Asp Leu Asp Arg Asp
385   390   395   400

Gly Tyr Asn Asp Ile Ala Val Ala Ala Pro Tyr Gly Gly Pro Ser Gly
            405   410   415

Arg Gly Gln Val Leu Val Phe Leu Gly Gln Ser Glu Gly Leu Arg Ser
            420   425   430

Arg Pro Ser Gln Val Leu Asp Ser Pro Phe Pro Thr Gly Ser Ala Phe
            435   440   445

Gly Phe Ser Leu Arg Gly Ala Val Asp Ile Asp Asp Asn Gly Tyr Pro
    450   455   460

Asp Leu Ile Val Gly Ala Tyr Gly Ala Asn Gln Val Ala Val Tyr Arg
465   470   475   480

Ala Gln Pro Val Val Lys Ala Ser Val Gln Leu Leu Val Gln Asp Ser
            485   490   495

Leu Asn Pro Ala Val Lys Ser Cys Val Leu Pro Gln Thr Lys Thr Pro
            500   505   510

Val Ser Cys Phe Asn Ile Gln Met Cys Val Gly Ala Thr Gly His Asn
            515   520   525

Ile Pro Gln Lys Leu Ser Leu Asn Ala Glu Leu Gln Leu Asp Arg Gln
    530   535   540

Lys Pro Arg Gln Gly Arg Arg Val Leu Leu Leu Gly Ser Gln Gln Ala
545   550   555   560

Gly Thr Thr Leu Asn Leu Asp Leu Gly Gly Lys His Ser Pro Ile Cys
            565   570   575

His Thr Thr Met Ala Phe Leu Arg Asp Glu Ala Asp Phe Arg Asp Lys
            580   585   590

Leu Ser Pro Ile Val Leu Ser Leu Asn Val Ser Leu Pro Pro Thr Glu
            595   600   605

Ala Gly Met Ala Pro Ala Val Val Leu His Gly Asp Thr His Val Gln
    610   615   620

Glu Gln Thr Arg Ile Val Leu Asp Ser Gly Glu Asp Asp Val Cys Val
625   630   635   640

Pro Gln Leu Gln Leu Thr Ala Ser Val Thr Gly Ser Pro Leu Leu Val
            645   650   655

Gly Ala Asp Asn Val Leu Glu Leu Gln Met Asp Ala Ala Asn Glu Gly
            660   665   670

Glu Gly Ala Tyr Glu Ala Glu Leu Ala Val His Leu Pro Gln Gly Ala
            675   680   685

His Tyr Met Arg Ala Leu Ser Asn Val Glu Gly Phe Glu Arg Leu Ile
    690   695   700

Cys Asn Gln Lys Lys Glu Asn Glu Thr Arg Val Val Leu Cys Glu Leu
705   710   715   720

Gly Asn Pro Met Lys Lys Asn Ala Gln Ile Gly Ile Ala Met Leu Val
            725   730   735

739

```
Ser Val Gly Asn Leu Glu Glu Ala Gly Glu Ser Val Ser Phe Gln Leu
            740                 745                 750

Gln Ile Arg Ser Lys Asn Ser Gln Asn Pro Asn Ser Lys Ile Val Leu
        755                 760                 765

Leu Asp Val Pro Val Arg Ala Glu Ala Gln Val Glu Leu Arg Gly Asn
    770                 775                 780

Ser Phe Pro Ala Ser Leu Val Val Ala Ala Glu Glu Gly Glu Arg Glu
785                 790                 795                 800

Gln Asn Ser Leu Asp Ser Trp Gly Pro Lys Val His Thr Tyr Glu
            805                 810                 815

Leu His Asn Asn Gly Pro Gly Thr Val Asn Gly Leu His Leu Ser Ile
            820                 825                 830

His Leu Pro Gly Gln Ser Gln Pro Ser Asp Leu Leu Tyr Ile Leu Asp
        835                 840                 845

Ile Gln Pro Gln Gly Gly Leu Gln Cys Phe Pro Gln Pro Pro Val Asn
    850                 855                 860

Pro Leu Lys Val Asp Trp Gly Leu Pro Ile Pro Ser Pro Ser Pro Ile
865                 870                 875                 880

His Pro Ala His His Lys Arg Asp Arg Arg Gln Ile Phe Leu Pro Glu
            885                 890                 895

Pro Glu Gln Pro Ser Arg Leu Gln Asp Pro Val Leu Val Ser Cys Asp
            900                 905                 910

Ser Ala Pro Cys Thr Val Val Gln Cys Asp Leu Gln Glu Met Ala Arg
        915                 920                 925

Gly Gln Arg Ala Met Val Thr Val Leu Ala Phe Leu Trp Leu Pro Ser
    930                 935                 940

Leu Tyr Gln Arg Pro Leu Asp Gln Phe Val Leu Gln Ser His Ala Trp
945                 950                 955                 960

Phe Asn Val Ser Ser Leu Pro Tyr Ala Val Pro Pro Leu Ser Leu Pro
            965                 970                 975
```

Arg Gly Glu Ala Gln Val Trp Thr Gln Leu Leu Arg Ala Leu Glu Glu
            980   985   990

Arg Ala Ile Pro Ile Trp Trp Val Leu Val Gly Val Leu Gly Gly Leu
            995   1000   1005

Leu Leu Leu Thr Ile Leu Val Leu Ala Met Trp Lys Val Gly Phe
        1010   1015   1020

Phe Lys Arg Asn Arg Pro Pro Leu Glu Glu Asp Asp Glu Glu Gly
        1025   1030   1035

Glu

<210> 2430
<211> 145
<212> PRT
<213> Homo sapiens

<400> 2430

Met Ala Thr Trp Ala Leu Leu Leu Ala Ala Met Leu Leu Gly Asn
1   5   10   15

Pro Gly Leu Val Phe Ser Arg Leu Ser Pro Glu Tyr Tyr Asp Leu Ala
            20   25   30

Arg Ala His Leu Arg Asp Glu Glu Lys Ser Cys Pro Cys Leu Ala Gln
        35   40   45

Glu Gly Pro Gln Gly Asp Leu Leu Thr Lys Thr Gln Glu Leu Gly Arg
    50   55   60

Asp Tyr Arg Thr Cys Leu Thr Ile Val Gln Lys Leu Lys Lys Met Val
65   70   75   80

Asp Lys Pro Thr Gln Arg Ser Val Ser Asn Ala Ala Thr Arg Val Cys
            85   90   95

Arg Thr Gly Arg Ser Arg Trp Arg Asp Val Cys Arg Asn Phe Met Arg
            100   105   110

Arg Tyr Gln Ser Arg Val Thr Gln Gly Leu Val Ala Gly Glu Thr Ala
        115   120   125

Gln Gln Ile Cys Glu Asp Leu Arg Leu Cys Ile Pro Ser Thr Gly Pro
    130   135   140

Leu
145

<210> 2431
<211> 262
<212> PRT
<213> Homo sapiens

<400> 2431

Met Arg Asn Ser Tyr Arg Phe Leu Ala Ser Ser Leu Ser Val Val Val
1   5   10   15

Ser Leu Leu Leu Ile Pro Glu Asp Val Cys Glu Lys Ile Ile Gly Gly
            20   25   30

Asn Glu Val Thr Pro His Ser Arg Pro Tyr Met Val Leu Leu Ser Leu
        35   40   45

Asp Arg Lys Thr Ile Cys Ala Gly Ala Leu Ile Ala Lys Asp Trp Val
    50   55   60

Leu Thr Ala Ala His Cys Asn Leu Asn Lys Arg Ser Gln Val Ile Leu
65   70   75   80

Gly Ala His Ser Ile Thr Arg Glu Glu Pro Thr Lys Gln Ile Met Leu
            85   90   95

Val Lys Lys Glu Phe Pro Tyr Pro Cys Tyr Asp Pro Ala Thr Arg Glu
            100   105   110

Gly Asp Leu Lys Leu Leu Gln Leu Thr Glu Lys Ala Lys Ile Asn Lys
            115   120   125

Tyr Val Thr Ile Leu His Leu Pro Lys Lys Gly Asp Asp Val Lys Pro
    130   135   140

Gly Thr Met Cys Gln Val Ala Gly Trp Gly Arg Thr His Asn Ser Ala
145   150   155   160

Ser Trp Ser Asp Thr Leu Arg Glu Val Asn Ile Thr Ile Ile Asp Arg
                165   170   175

Lys Val Cys Asn Asp Arg Asn His Tyr Asn Phe Asn Pro Val Ile Gly
            180   185   190

Met Asn Met Val Cys Ala Gly Ser Leu Arg Gly Gly Arg Asp Ser Cys
            195   200   205

Asn Gly Asp Ser Gly Ser Pro Leu Leu Cys Glu Gly Val Phe Arg Gly
    210   215   220

Val Thr Ser Phe Gly Leu Glu Asn Lys Cys Gly Asp Pro Arg Gly Pro
225   230   235   240

Gly Val Tyr Ile Leu Leu Ser Lys Lys His Leu Asn Trp Ile Ile Met
            245   250   255

Thr Ile Lys Gly Ala Val
            260

<210> 2432
<211> 142
<212> PRT
<213> Homo sapiens

<400> 2432

Met Val Leu Ser Pro Ala Asp Lys Thr Asn Val Lys Ala Ala Trp Gly
1   5   10   15

Lys Val Gly Ala His Ala Gly Glu Tyr Gly Ala Glu Ala Leu Glu Arg
            20   25   30

Met Phe Leu Ser Phe Pro Thr Thr Lys Thr Tyr Phe Pro His Phe Asp
            35   40   45

Leu Ser His Gly Ser Ala Gln Val Lys Gly His Gly Lys Lys Val Ala
    50   55   60

Asp Ala Leu Thr Asn Ala Val Ala His Val Asp Asp Met Pro Asn Ala
65   70   75   80

Leu Ser Ala Leu Ser Asp Leu His Ala His Lys Leu Arg Val Asp Pro
            85   90   95

Val Asn Phe Lys Leu Leu Ser His Cys Leu Leu Val Thr Leu Ala Ala
            100   105   110

His Leu Pro Ala Glu Phe Thr Pro Ala Val His Ala Ser Leu Asp Lys
            115   120   125

Phe Leu Ala Ser Val Ser Thr Val Leu Thr Ser Lys Tyr Arg
    130   135   140

743

```
<210>  2433
<211>  142
<212>  PRT
<213>  Homo sapiens

<400>  2433

Met Ser Leu Thr Lys Thr Glu Arg Thr Ile Ile Val Ser Met Trp Ala
1               5                   10                  15


Lys Ile Ser Thr Gln Ala Asp Thr Ile Gly Thr Glu Thr Leu Glu Arg
            20                  25                  30


Leu Phe Leu Ser His Pro Gln Thr Lys Thr Tyr Phe Pro His Phe Asp
        35                  40                  45


Leu His Pro Gly Ser Ala Gln Leu Arg Ala His Gly Ser Lys Val Val
    50                  55                  60


Ala Ala Val Gly Asp Ala Val Lys Ser Ile Asp Asp Ile Gly Gly Ala
65                  70                  75                  80


Leu Ser Lys Leu Ser Glu Leu His Ala Tyr Ile Leu Arg Val Asp Pro
            85                  90                  95


Val Asn Phe Lys Leu Leu Ser His Cys Leu Leu Val Thr Leu Ala Ala
            100                 105                 110


Arg Phe Pro Ala Asp Phe Thr Ala Glu Ala His Ala Ala Trp Asp Lys
        115                 120                 125


Phe Leu Ser Val Val Ser Ser Val Leu Thr Glu Lys Tyr Arg
    130                 135                 140


<210>  2434
<211>  147
<212>  PRT
<213>  Homo sapiens

<400>  2434

Met Val His Leu Thr Pro Glu Glu Lys Thr Ala Val Asn Ala Leu Trp
1               5                   10                  15


Gly Lys Val Asn Val Asp Ala Val Gly Gly Glu Ala Leu Gly Arg Leu
            20                  25                  30


Leu Val Val Tyr Pro Trp Thr Gln Arg Phe Phe Glu Ser Phe Gly Asp
```

```
        35                      40                      45

Leu Ser Ser Pro Asp Ala Val Met Gly Asn Pro Lys Val Lys Ala His
    50                      55                      60


Gly Lys Lys Val Leu Gly Ala Phe Ser Asp Gly Leu Ala His Leu Asp
65                      70                      75                      80


Asn Leu Lys Gly Thr Phe Ser Gln Leu Ser Glu Leu His Cys Asp Lys
                    85                      90                      95


Leu His Val Asp Pro Glu Asn Phe Arg Leu Leu Gly Asn Val Leu Val
                    100                     105                     110


Cys Val Leu Ala Arg Asn Phe Gly Lys Glu Phe Thr Pro Gln Met Gln
                    115                     120                     125


Ala Ala Tyr Gln Lys Val Val Ala Gly Val Ala Asn Ala Leu Ala His
    130                     135                     140


Lys Tyr His
145


<210>   2435
<211>   147
<212>   PRT
<213>   Homo sapiens

<400>   2435

Met Val His Phe Thr Ala Glu Glu Lys Ala Ala Val Thr Ser Leu Trp
1                   5                       10                      15


Ser Lys Met Asn Val Glu Glu Ala Gly Gly Glu Ala Leu Gly Arg Leu
                    20                      25                      30


Leu Val Val Tyr Pro Trp Thr Gln Arg Phe Phe Asp Ser Phe Gly Asn
                    35                      40                      45


Leu Ser Ser Pro Ser Ala Ile Leu Gly Asn Pro Lys Val Lys Ala His
    50                      55                      60


Gly Lys Lys Val Leu Thr Ser Phe Gly Asp Ala Ile Lys Asn Met Asp
65                      70                      75                      80


Asn Leu Lys Pro Ala Phe Ala Lys Leu Ser Glu Leu His Cys Asp Lys
                    85                      90                      95
```

```
Leu His Val Asp Pro Glu Asn Phe Lys Leu Leu Gly Asn Val Met Val
                100                 105                 110


Ile Ile Leu Ala Thr His Phe Gly Lys Glu Phe Thr Pro Glu Val Gln
            115                 120                 125


Ala Ala Trp Gln Lys Leu Val Ser Ala Val Ala Ile Ala Leu Ala His
        130                 135                 140


Lys Tyr His
145
```

```
<210>  2436
<211>  147
<212>  PRT
<213>  Homo sapiens

<400>  2436
```

```
Met Gly His Phe Thr Glu Glu Asp Lys Ala Thr Ile Thr Ser Leu Trp
1               5                   10                  15


Gly Lys Val Asn Val Glu Asp Ala Gly Gly Glu Thr Leu Gly Arg Leu
            20                  25                  30


Leu Val Val Tyr Pro Trp Thr Gln Arg Phe Phe Asp Ser Phe Gly Asn
        35                  40                  45


Leu Ser Ser Ala Ser Ala Ile Met Gly Asn Pro Lys Val Lys Ala His
    50                  55                  60


Gly Lys Lys Val Leu Thr Ser Leu Gly Asp Ala Thr Lys His Leu Asp
65                  70                  75                  80


Asp Leu Lys Gly Thr Phe Ala Gln Leu Ser Glu Leu His Cys Asp Lys
                85                  90                  95


Leu His Val Asp Pro Glu Asn Phe Lys Leu Leu Gly Asn Val Leu Val
                100                 105                 110


Thr Val Leu Ala Ile His Phe Gly Lys Glu Phe Thr Pro Glu Val Gln
            115                 120                 125


Ala Ser Trp Gln Lys Met Val Thr Ala Val Ala Ser Ala Leu Ser Ser
        130                 135                 140


Arg Tyr His
```

145

<210> 2437
<211> 142
<212> PRT
<213> Homo sapiens

<400> 2437

Met Ala Leu Ser Ala Glu Asp Arg Ala Leu Val Arg Ala Leu Trp Lys
1   5   10   15

Lys Leu Gly Ser Asn Val Gly Val Tyr Thr Thr Glu Ala Leu Glu Arg
            20   25   30

Thr Phe Leu Ala Phe Pro Ala Thr Lys Thr Tyr Phe Ser His Leu Asp
        35   40   45

Leu Ser Pro Gly Ser Ser Gln Val Arg Ala His Gly Gln Lys Val Ala
    50   55   60

Asp Ala Leu Ser Leu Ala Val Glu Arg Leu Asp Asp Leu Pro His Ala
65   70   75   80

Leu Ser Ala Leu Ser His Leu His Ala Cys Gln Leu Arg Val Asp Pro
                85   90   95

Ala Ser Phe Gln Leu Leu Gly His Cys Leu Leu Val Thr Leu Ala Arg
            100   105   110

His Tyr Pro Gly Asp Phe Ser Pro Ala Leu Gln Ala Ser Leu Asp Lys
        115   120   125

Phe Leu Ser His Val Ile Ser Ala Leu Val Ser Glu Tyr Arg
    130   135   140

<210> 2438
<211> 260
<212> PRT
<213> Homo sapiens

<400> 2438

Met Arg Pro Glu Asp Arg Met Phe His Ile Arg Ala Val Ile Leu Arg
1   5   10   15

Ala Leu Ser Leu Ala Phe Leu Leu Ser Leu Arg Gly Ala Gly Ala Ile
            20   25   30